

1871.
ents.
Table.
MEDALS
INE
e
ATED
ALS:
of miles
s in, ex
S, yours
ciples of
signed."
EN,
ker,
rdest
ANY
E
S,
ES and
ona,
diameter,
cking
1873.
ES
CITY

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2038.—VOL. XLIV.

LONDON, SATURDAY, SEPTEMBER 12, 1874.

[WITH SUPPLEMENT.] PRICE SIXPENCE.
PER ANNUM, BY POST, £1 4s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
(SUCCESSOR TO JAMES CROFTS).
Established 1842.

BUSINESS transacted in every description of BRITISH and FOREIGN Stocks and Shares, and in all COLLIERY and IRON SHARES.

SPECIAL BUSINESS in shares not having a general market value.

COLLIERIES.
Shares herein may be secured at LOWEST MARKET PRICES net. SPECIAL BUSINESS in Bilson and Crump Meadow, Chapel House, Cardiff and Swansea, Cleve Hill, Henry Briggs and Co. New Shariston, Thorp's Gawber Hall, United Bituminous, Welsh Freehold, Wayne's Merthyr.
Orders on hand in Glaisdale Quarry, Lawe's Chemical, Langdale Chemical (offer wanted for 50), Newcastle Chemical, Nant-y-Glo and Blaith, and other Miscellaneous Shares.

Business transacted in all Mining Shares.

Bankers: City Bank, London; South Cornhill Bank, St. Austell.

MR. WILLIAM H. BUMPUS, STOCK AND SHARE DEALER, AND MINING AGENT,
44, THREADNEEDLE STREET, LONDON, E.C.

Transacts business at best market prices, and free of commission, in—
Mining Shares of all kinds.
British, Foreign, and Colonial Stocks and Bonds.
Railways, Banks, Gas, and Insurance Shares.
Colliery and Iron Companies.

Telegraph, Tramway, and Miscellaneous Shares, and all Securities dealt in on the London Stock Exchange.

Purchases and Sales negotiated in Unmarketable Stocks and Shares.

Speculative Accounts opened for the Fortnightly Settlement.

Applications are invited for the undermentioned Shares at prices annexed, and offers for those lots where no prices are named:—

10 Ashton, £2½.	50 East Caradon, 23s. 6d.	35 Russia Copper.
20 Bilson and Crump.	70 Frontino, 6s. 6d.	20 Roman Grav., £14½.
40 Birdseye Creek, £2 8 0	100 Furze Hill (Tin).	30 Rookhope, 11s.
50 Bog, 8s. 9d.	30 Flagstaff, £3½.	40 Richmond, £6 6s. 3d.
20 Blue Tent.	10 Great Laxey, £12½.	150 Rossa Grande.
25 Bampfyde.	50 Glaisdale Quarry.	25 Sweetland Creek.
40 Chicago (Silver), £25¼.	25 Hingston Down, 28s 9	10 So. Condurrow, £3 11 3
100 Chontales, 12s. 6d.	3 Herodfoot, 23s.	20 So. Carn Brea.
30 Cedar Creek.	75 Last Chance, 28s. 9d.	5 Spear Moor, £4½.
40 Chapel House, £4½.	20 Ladywell, £2 18s. 9d.	100 Thornhill Reef.
3 Carn Brea.	50 Lovell (Tin).	15 Tankerville, £7½.
15 Cape Copper, £28½.	25 Marke Valley, 20s. 6d.	50 Tecoma, 10s.
100 Cathedral.	50 Malpas, 15s. 3d.	2 Tincroft, £31½.
70 Cleve Hill Coll., 8s. 9d.	100 Malabar, 15s. 6d.	20 Thorp's Gawber.
40 Cardiff and Swansea.	40 N. Zealand Kapanga.	40 Unit. Mexican, £35½.
100 Den Pedro.	25 New Quebrada, £3 8s 9	15 Utah, 6s. 3d.
2 Dolcoath, £45½.	30 Port Nigel, 35s.	5 Van, £23½.
30 East Grenville, 7s. 6d.	40 Pennerley, 25s. 6d.	30 Van Consols, £2 11s 3d
2 Eberhardt.	100 Port Phillip, 10s. 6d.	100 West Maria, 8s.
40 Emma (Silver), 30s 6d	80 Prince of Wales, 15s.	15 Wheel Grenville, £4½.
20 East Chiverton.	60 Penstruthal, 11s.	50 Welsh Freehold.
5 East Lovell.	50 Parys Mountain, 9s 6d	10 Wheel Kitty, £20½.

* Holders wishing to dispose of Shares may avail themselves of the above Medium, free of charge. Particulars of Shares for Insertion (with lowest limits) should be delivered not later than Four P.M. on Fridays.

Advantage should be taken of the present favourable opportunity for securing Shares in SOUND Mines and Collieries.

W. H. B. devotes special attention to this class of Security, which, if a judicious Selection be made, will pay remarkably well, either as an INVESTMENT OR SPECULATION. The Shares of several First-rate Properties may now be obtained at extremely low prices, and cannot fail to improve very considerably in Market Value within the next few months.

Reliable Information and Advice given to intending Investors and others on application.

Bankers: The National Provincial Bank of England, E.C.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., transacts business at best prices in every description of security.

OFFERS WANTED FOR—6 Miners and 50 Wheel Whistler shares.
* PRINCE PATRICK.—E. J. B. has FOR SALE, 100 Shares (£1 paid). The mine is paying regular dividends, and the reserves of ore valued at some thousands of pounds.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
77, CORNHILL, LONDON.
Bankers: London and Westminster.

Turkish Six Per Cent. Loans of 1854, 1855, 1862, 1865, and 1875, in all probability, will command par price (100) within a short period. The interest due half-yearly on the tribute loans of 1854 and 1871, is paid into the Bank of England by the Egyptian Government direct. These are as good as any 6 per cent. guaranteed stock. Business transacted on the usual commission.

FERDINAND R. KIRK, STOCK BROKER,
5, BIRCHIN LANE, E.C.

Consols, Foreign Bonds, Railways, and every security quoted on 'Change bought and sold. Fortnightly accounts opened.

Bankers: London and Westminster, and City Bank.

SELLER—
15 Bilson & Crump, £7½.
20 Briggs (Henry), £26½.
10 Thorp's Gawber, £15½.

BUYER—
20 Birdseye, £23½.
100 Gold Run, 6s.
15 Flagstaff.

Thorp's Gawber pay 40 per cent. Bilson and Crump, 30 per cent. These and Glaisdale, with Welsh Freehold, will pay well to buy.

OFFER WANTED for a few Denbighshire and New South Merilyn.

MR. WILIAM WARD
(Late WARD and LITTLEWOOD).
CROSBY HOUSE, 95, BISHOPSGATE STREET WITHIN, E.C.,
DEALS IN ALL KINDS OF STOCKS AND SHARES, for cash or the account.

MR. HENRY MANSELL, STOCK AND SHARE DEALER,
14, GREAT WINCHESTER STREET, LONDON, E.C.
R. M. recommends the purchase of COLORADO TERRIBLE shares.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.
Some valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for September now ready, post free, price 6d.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS,
85, GRACECHURCH STREET, LONDON, E.C.
Government and every negotiable Stocks dealt in for cash or account. Order and telegrams punctually attended to.

We advise immediate application and purchase of the BAMPFYDE and LLANWYTHY shares. A rise in price is inevitable.

MESSRS. W. DUNN AND CO., STOCK AND SHARE DEALERS,
3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

Orders received and commissions executed.

Bankers: National Provincial Bank of England.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C.
(Established 24 years.)

G. E. SIMPSON, STOCK AND SHARE DEALER,
SELL THE FOLLOWING SHARES, free of commission:—
40 Birdseye Crk., £2 11s 3
10 Cook's Kith., £2 12s 6
50 Cardiff and Swansea, £3 11s 3d.
85 Chapel House, £4½.
10 Dolcoath, £45½.
15 East Lovell, £11½.

SPECIAL BUSINESS in the LIVE STOCK INSURANCE COMPANY OF GREAT BRITAIN (Limited).

INVESTMENT OR SPECULATION.—A SELECTED LIST OF RAILWAYS, BANKS, MINES, COLLIERIES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c., forwarded to bona fide investors on application. In addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.

P. WATSON, STOCK AND SHARE DEALER,
79, OLD BROAD STREET, LONDON.

(Three doors only from Hercules-passage, entrance to the Stock Exchange.)

Twenty-nine years' experience.

Bankers: The Alliance Bank, and the Union Bank of London.

References given and required (when necessary) in all the principal towns of the United Kingdom.

MR. T. E. W. THOMAS, SWORN SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.

The following are the latest prices at which business could be done. Holders of mining shares desiring a market quotation for their stock can have their application answered in this list if received not later than Four P.M. on Fridays:—

Buyers.		Sellers.		Buyers.		Sellers.	
Bampfyde.....	2s. 6d.	2s. 6d.	2s. 6d.	Perkins Beach.....	2s. 6d.	2s. 6d.	2s. 6d.
Bog.....	2s. 6d.	2s. 6d.	2s. 6d.	Price of Wales.....	12s. 6d.	12s. 6d.	12s. 6d.
Birdseye Creek.....	2s. 6d.	2s. 6d.	2s. 6d.	Providence.....	3s. 6d.	3s. 6d.	3s. 6d.
Carn Brea.....	5s. 6d.	5s. 6d.	5s. 6d.	Richmond.....	6s. 6d.	6s. 6d.	6s. 6d.
Chapel House Colliery.....	4s. 6d.	4s. 6d.	4s. 6d.	Roman Gravels.....	14s. 6d.	14s. 6d.	14s. 6d.
Clee Hill Colliery.....	9s. 6d.	9s. 6d.	9s. 6d.	Rosewall Hill.....	5s. 6d.	5s. 6d.	5s. 6d.
Cook's Kitchen.....	9s. 6d.	9s. 6d.	9s. 6d.	South Aurora.....	12s. 6d.	12s. 6d.	12s. 6d.
Devon Great Consols.....	15s. 6d.	15s. 6d.	15s. 6d.	South Carn Brea.....	2s. 6d.	2s. 6d.	2s. 6d.
Ding Dong.....	7s. 6d.	7s. 6d.	7s. 6d.	South Condurrow.....	3s. 6d.	3s. 6d.	3s. 6d.
Dolcoath.....	4s. 6d.	4s. 6d.	4s. 6d.	South Roman Gravels.....	14s. 6d.	14s. 6d.	14s. 6d.
Eberhardt.....	11s. 6d.	11s. 6d.	11s. 6d.	Sweetland Creek.....	3s. 6d.	3s. 6d.	3s. 6d.
East Lovell.....	11s. 6d.	11s. 6d.	11s. 6d.	Tankerville.....	3s. 6d.	3s. 6d.	3s. 6d.
East Van.....	15s. 6d.	15s. 6d.	15s. 6d.	Tincroft.....	30s. 6d.	30s. 6d.	30s. 6d.
Emma.....	13s. 6d.	13s. 6d.	13s. 6d.	Tylwyd.....	17s. 6d.	17s. 6d.	17s. 6d.
Flagstaff.....	3s. 6d.	3s. 6d.	3s. 6d.	Utah.....	7s. 6d.	7s. 6d.	7s. 6d.
Great West Van.....	15s. 6d.	15s. 6d.	15s. 6d.	Van.....	22s. 6d.	22s. 6d.	22s. 6d.
Ladywell.....	23s. 6d.	23s. 6d.	23s. 6d.	Van Consols.....	3s. 6d.	3s. 6d.	3s. 6d.
Marke Valley.....	17s. 6d.	17s. 6d.	17s. 6d.	West Chiverton.....	2s. 6d.	2s. 6d.	2s. 6d.
New Consols.....	13s. 6d.	13s. 6d.	13s. 6d.	West Maria.....	8s. 6d.	8s. 6d.	8s. 6d.
Parys Mountain.....	6s. 6d.	6s. 6d.	6s. 6d.	West Tolgus.....	3s. 6d.	3s. 6d.	3s. 6d.
Pennerley.....	11s. 6d.	11s. 6d.	11s. 6d.	Wheel Grenville.....	3s. 6d.	3s. 6d.	3s. 6d.
Penstruthal.....	11s. 6d.	11s. 6d.	11s. 6d.	Wh. Kitty (St. Agnes).....	6s. 6d.	6s. 6d.	6s. 6d.

BARTLETT AND CHAPMAN,
STOCK AND SHARE DEALERS,
FINSBURY SQUARE BUILDINGS, LONDON, E.C.

Shares Bought and Sold at the closest net market prices.

MR. E. CHARTERS, 36, NORTHUMBERLAND STREET,
CHANCERY CROSS, LONDON, can do BUSINESS in the FOLLOWING SHARES, free of commission:—

30 Almada, 11s. 9d.	20 Gt. West Van, £1.	50 Prince of Wales, 12s 3d
30 Bampfyde, £24½.	20 Herodfoot, £3.	30 Richmond, £26½.
3 Belavista, £15.	25 Hingston Down, £1.	50 Rookhope, 11s. 9d.
25 Birdseye Creek, £23½.	15 Ladywell, £23½.	45 Rosewall Hill, 6s. 3d.
2 Carn Brea, £54.	50 Last Chance, £1.	20 Russia Copper, £22½.
30 Cedar Creek, £17½.	50 Lovell, £11½.	40 Rica, 6s. 3d.
30 Chapel House, £4.	25 Malabar, 15s. 6d.	40 Sierra Buttes, £2.
30 Cardiff and Swan., £3	60 Malpas, 12s. 3d.	50 South Aurora, 8s. 6d.
50 Cathedral, 17s. 6d.	50 Marke Valley, 16s. 9d.	20 So. Carn Brea, £2.
3 Dolcoath, £44.	30 Mid-Moonta, £3.	25 So. Roman Gra., 10s 6
10 Emma, £17½.	30 New Quebrada, £3.	20 Tankerville, £7.
10 East Lovell, £11.	12 Newfoundland, £7.	8 Thornhill Reef, 15s.
25 East Caradon, 8s. 9d.	10 Thorp's Gawber, £15.	10 Thorp's Gawber, £15.
50 East Caradon, 8s. 9d.	50 Old Bathols, 5s. 6d.	30 Tecoma, 10s. 6d.
50 East Basset, £3.	50 Pennerley, £11½.	30 Van Consols, £23½.
20 Flagstaff, £33½.	40 Plynlimmon, 5s. 9d.	50 West Chiverton, £2.
5 Great Laxey, £11.	20 Providence, £35½.	30 Wheel Uny, £1½.
35 Green Hurth, £6.	60 Penstruthal, 11s. 9d.	70 West Maria, 8s. 6d.
25 Glasgow Caradon, £1	50 Port Phillip, 8s. 6d.	5 West Basset, £3.

MR. JAMES HUME, STOCK AND SHARE BROKER,
1, ST. SWITHIN'S LANE, LOMBARD STREET, LONDON, E.C.
Business transacted in Railways, Foreign Bonds, Erie, Lombard, and all other shares for account. Mining Shares of all kinds bought, sold, or exchanged.

Orders by telegram promptly executed. Sound securities to pay 10 per cent. recommended.

Bankers: The London Joint-Stock Bank.

MESSRS. W. J. TALLENTIRE AND CO.,
STOCK AND SHARE BROKERS,
20, CHANGE ALLEY, CORNHILL, LONDON, E.C., transact business in Stock Exchange Securities and Mining Shares of every description.

A Selected List of Safe Investments forwarded to intending investors post free upon application. Fourteen years' experience.

MESSRS. MILLER AND CO., STOCK AND SHARE DEALERS,
61 and 62, QUEEN'S BUILDINGS, QUEEN VICTORIA STREET, LONDON, E.C., PUBLISH A DAILY AND WEEKLY LIST OF PRICES OF FUNDS, Government Securities, Banks, Railways (home and foreign), Mines, Docks, Gas, Telegraph, Waterworks, and miscellaneous companies shares.

Messrs. MILLER and Co. have Special Business in the TRAMWAYS and GENERAL LICHTERAGE AND TRANSIT COMPANY (Limited) at close market prices; and are Sellers of Eberhardt, East Lovell, Emma, Roman Gravels, Last Chance, Bampfyde, and New Quebrada.

All orders punctually attended to, for cash or account.

Bankers: Prescott, Grote, Cave, and Co., Threadneedle-street, London, E.C.

MESSRS. SMITH AND CO., 126, BISHOPSGATE STREET WITHIN, LONDON, E.C.
Messrs. SMITH and Co. transact Business in every species of Stocks and Shares.

SPECIAL BUSINESS in Chapel House, Blaen Owmbach, Alltarni, and Clee Hill Collieries; Malpas, Malabar, Sweetland, and Birdseye Creek; Great Laxey, Tylwyd, and Grogwinion and Mellindur Valley Shares.

Messrs. SMITH and Co.'s "Investment Circular" may be had on application.

HARLAND AND CO., STOCK AND SHARE DEALERS,
285 and 286, GRESHAM HOUSE, LONDON, E.C.
Transact business in Kingston Vaux, Chapel House, Alltarni, Cardiff and Swansea, Welsh Freehold, United Bituminous, and Clee Hill Collieries—Tankerville, West Tankerville, Lovell, Denbighshire, Tylwyd, Roman Gravels, Birdseye Creek, Sweetland Creek, and every description of Stocks and Shares.

Circular and Daily Price-List gratis.

Bankers: London and County Bank.

MR. JAMES STOCKER, 2, CROWN COURT, THREADNEEDLE STREET.
Railway, Bank, Foreign Bonds, and all other Stocks and Shares for Investment or Speculation.

SPECIAL BUSINESS in the following:
50 Bampfyde, 48s.
30 Birdseye, 6s. 3d.
60 Bog, 10s.
10 Blue Tent.
30 Cardiff & Swan., £33½.
75 Chapel House Col., £4½.
70 Chontales, 12s. 9d.
70 Cedar Creek, 32s.
60 Clee Hill Colliery.
5 Cook's Kitchen, £29½.
3 Dolcoath, £44½.
400 Don Pedro, 3s. 9d.
40 East Grenville.
35 Eberhardt, £2 8s. 9d.
50 Ebbw Vale.
30 Emma, 37s.
45 Flagstaff, £23½.
100 Frontino, 6s. 3d.
45 Glaisdale Quarry.
100 Gold Run, 9s.
15 Great Laxey, £11½.
45 Gawton.
50 Hingston, 27s. 6d.
65 Javall, 4s. 9d.

50 Ladywell, £23½.
30 Llanaarmon, 24s. 9d.
20 Langdale Chemical.
25 Last Chance, 26s. 3d.
50 Lovell (Tin), 25s. 6d.
65 Malabar, 15s. 6d.
55 Malpas, 12s. 6d.
50 Marke Valley.
100 New Pacific.
40 New Quebrada.
75 Old Treburtett, 13s 6d
90 Parys Mount, 8s.
40 Pennerley, 23s. 6d.
100 Penstruthal, 10s. 9d.
60 Plynlimmon, 5s. 9d.
70 Port Nigel, 36s.
180 Port Phillip, 9s. 3d.
100 Prince of Wales, 15s.
30 Roman Gravels, £14½.
65 Rookhope, 11s.
400 Rossa Grande, 1s. 3d.
25 Richmond, £6 8s. 9d.
55 Silkestone Fall.
100 South Aurora, 11s. 6d.
65 Javall, 4s. 9d.

35 So. Carn Brea, 43s.
60 South Roman Gravels.
30 Sweetland, £3 8s. 9d.
45 Thornhill Reef, 10s.
10 Thorp's Gawber, £15½.
100 Tecoma, 11s. 9d.
50 Tylwyd, 21s. 6d.
25 Tankerville, £7½.
4 Tincroft, £31½.
50 United Bituminous.
50 Utah, 9s.
5 Van, £23.
70 Van Consols, 51s.
40 Wedgwood Coal.
40 Welsh Freehold, £2 18s 9
30 W. Tankerville, 23s 9d
40 West Maria, 8s. 6d.
35 West Mostyn.
35 West Esgrail Lie, 38s 9
30 West Gorge.
10 Wheel Kitty.
10 W. Chiverton, 38s. 9d.
5 West Basset, £25½.
80 Yorks Peninsul, 10s.

Bankers: London and Westminster.

MR. T. P. THOMAS, MINING AGENT, 79, CHEAPSIDE, LONDON.
The most reliable advice given as to the value and prospects of Mines and Collieries, and commissions for sale or purchase executed at the closest prices.

Established 32 Years.

Is a SELLER of SHARES in TWO LEAD MINES that he can recommend for a great rise in price, and for permanent investment.

MR. CHARLES THOMAS,
MINING AGENT
3, GREAT ST. HELEN'S, LONDON, E.C.

MESSRS. A. W. THOMAS AND CO.,
10, COLEMAN STREET, E.C.
MINING AGENTS, AND STOCK AND SHARE DEALERS.

SOUTH PRINCE PATRICK.—Business in these shares either as buyers or sellers.

"Investments and Speculations, 1874."—Post free upon application.

NOTICE TO SHAREHOLDERS.

LADYWELL LEAD MINE (LIMITED).—
1000 SHARES WANTED.
Messrs. GOULD SHARP AND CO., 33, POULTRY, LONDON, E.C., are BUYERS for cash of 1000 SHARES, or any less number, in the above MINE, at £2 15s. per share. Sellers can have cash on receipt of transfer and certificates.

N.B.—Mine looking well; never better. About 80 tons of lead at surface. £6000 cash at bankers.

NOTICE TO SHAREHOLDERS.

EAST VAN LEAD MINE (LIMITED).—
1000 SHARES WANTED.
Messrs. GOULD SHARP AND CO., 33, POULTRY, LONDON, E.C., are BUYERS for cash of 1000 SHARES, or any less number, in the above MINE, at 17s. per share. Sellers can have cash on receipt of transfer and certificates.

N.B.—The prospects have improved, and the lode may cut rich any day. £6000 cash at bankers.

MESSRS. PENNINGTON AND CO., 3, ROYAL EXCHANGE BUILDINGS, E.C., STOCK AND SHARE DEALERS, have BUSINESS in the undermentioned:—

Birdseye.	Tecoma.	Sweetland Creek.
Emma.	West Wheel Gorge.	Malpas.
Flagstaff.	Gold Run.	Buller.
Kitty (St. Agnes).	Pacific.	Rica.
Cedar Creek.	Malabar.	West Esgrail Lie.

Parties wishing to purchase or sell in the foregoing are requested to make early application. PENNINGTON AND CO., SWORN BROKERS.

TO INVESTORS.

MESSRS. PENNINGTON AND CO.'S "MONTHLY RECORD OF INVESTMENTS," published on the first Thursday in each month, contains an exhaustive Review of the British and Foreign Stock and Share and Money Markets, &c., with an enumeration of safe investments, paying from 10 to 20 per cent. Price 6d. per copy, or 5s. annually.

PENNINGTON AND CO., 3, Royal Exchange-buildings, E.C.

GEORGE LAVINGTON, STOCK AND SHARE BROKER,
ST. MICHAEL'S CHAMBERS, 42, CORNHILL, LONDON, E.C.

MR. W. TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,
Deals in all descriptions of Stocks and Shares at close market prices.

MR. THOMAS SPARGO, MINING ENGINEER, STOCK AND SHARE DEALER,
QUEEN'S BUILDINGS, QUEEN VICTORIA STREET, MANSION HOUSE, LONDON, E.C.,

MR. THOMAS SPARGO, the Stock and Share Dealer so long known as of Gresham House, begs to announce to his clients and friends that he has REMOVED his OFFICES from Gresham House, to—

QUEEN'S BUILDINGS, QUEEN VICTORIA STREET, LONDON, E.C.,

Where he continues his business of dealing in all kinds of Stocks and Shares.

Bankers: Imperial Bank (Limited), Lothbury, London, E.C.

TO INVESTORS.

MR. SPARGO has FOR SALE £2000 in DEBENTURE BONDS of £100 each, redeemable at par in ten equal yearly drawings, interest coupons payable half-yearly.

THE NASCENT COPPER PROCESS.

The PROPRIETORS of this PATENT METHOD of TREATING LOW-CLASS SILVER and COPPER ORES are PREPARED to GRANT LICENSES for its USE at LOW ROYALTIES.

There is hardly a Mixed Metal mine in the world but may be made to pay dividends under this system.

All communications respecting the above should be addressed to—

MESSRS. EMMENS BROTHERS AND CO., 8, OLD JEWRY, LONDON, E.C.

Now ready, royal 8vo., 764 pp., cloth, with over 200 Illustrations, price 34s.

ELEMENTS OF METALLURGY;

A PRACTICAL TREATISE ON THE ART OF EXTRACTING METALS FROM THEIR ORES.

By J. ARTHUR PHILLIPS, M. Inst. C.E., F.G.S., F.C.S., &c.,

Ancien Elève de l'Ecole des Mines, Paris; Author of "Mining and Metallurgy of Gold and Silver," &c.

"The statistics and analyses here given represent both labour and time which it is difficult to estimate. * * The work will be eagerly sought for by Students in Science and Art, as well as by practical Workers in Metals."—*Colliery Guardian*.

London: CHARLES GRIFFIN AND COMPANY, 10, Stationers' Hall-court.

FIRST ISSUE OF 2000 SHARES, OF WHICH 235 HAVE BEEN APPLIED FOR AND ALLOTTED TO THE VENDORS.

THE GREAT RAKE LEAD MINING COMPANY (LIMITED).

Registered under the Companies Act, 1862,

whereby the liability of the shareholders is limited to the amount of their shares.

Capital £25,000, in 25,000 Shares of £1 each.

PAYABLE—5s. per share on application; 5s. on allotment; 5s. in two months; and 5s. in four months after allotment.

Prospectuses and application forms for shares to be had at the office of the company, No. 2, Bank Chambers, Tenet-street, Derby. See manager's report.

THE OLD TALARGOCH LEAD MINING COMPANY (LIMITED), FLINTSHIRE.

Capital £100,000, in 10,000 Shares of £10 each.

Of which there are only about 4000 Shares available, as 4000 are to be allotted pursuant to the purchase agreement, and about 2000 having been already applied for by the directors, their friends, and the old shareholders.

PAYABLE—£1 on application, £1 on allotment, £3 in three months from date of allotment, two further calls of £1 each at intervals of not less than two months. It is estimated that will put the mine in perfect working order, and leave about £18,000 available capital.

DIRECTORS.

HENRY CHURTON, Esq., West Mount, Chester, Coroner for South Cheshire, and Director of the Foxdale Mining Company, Isle of Man.

P. ELLIS EYTON, Esq., M.P. for Flintshire Boroughs.

J. R. JONES, Esq., Pystill, near Holywell, Director of the late Company.

Sir JOHN ILES MANTELL, Knight, Manchester, Stipendiary Justice for the Division of Manchester, and Director of the Scottish Amicable Life Assurance Society, Glasgow and London.

CLEMENT D. WILLIAMSON, Esq., Plas-y-Morfa, near Holywell, Director of the late Company.

Capt. W. WRIGHT, Bodlondeb, Rhyl.

BANKERS.

BROWN, JANSON, and CO., Abchurch-lane, London.

DIXONS and COMPANY, Chester.

UNION BANK OF MANCHESTER, York-street, Manchester, and Branches.

NATIONAL BANK OF LIVERPOOL, Agents for the Union Bank of Manchester.

SOLICITORS.

Messrs. HULME, FOYSTER, and FOYSTER, 22, Brazenose-street, Manchester.

SECRETARY.

WILLIAM SMITH, Esq., Melidon, near Rhyl.

AUDITOR.

JOHN S. BLEASE, Esq., Public Accountant, Liverpool.

BROKERS.

Mr. HY. AUSTIN, 33, Manchester Chambers, Market-street, Manchester; and 37A, King-street, Oldham.

Mr. ALEXANDER MORISON, 2, India Buildings, Liverpool.

REGISTERED OFFICES.—AT THE MINE, TALARGOCH, NEAR RHYL.

This company is formed for the purpose of purchasing and acquiring the property, mining interests, machinery, plant, and effects of the Talargoch Mining Company (Limited), and developing the great mineral wealth of the same, by deepening and extending the levels, supplying the newest self-acting machinery for dressing the ores, altering the boilers by introducing all recent improvements, and so effect a reduction of expenses, which will materially add to the dividends, and for such other objects and purposes as appear in the Memorandum of Association, a copy of which is appended hereto.

The property is one of the oldest in the kingdom, and by many good authorities is said to be, without exception, the best. It has paid handsome profits during a working of several hundred years, out of which almost the whole of the enormous field of machinery, plant, shafts, levels, &c., have been paid for.

Talargoch is situated about one and a-half mile from Prestatyn Station, and about three miles from Rhyl, on the Chester and Holyhead Railway, from which there is a line through the sett for the convenience of the mine.

The machinery comprises, amongst other things, 15 steam-engines, of the following sizes—two 24 in., one 100 in., one pair of 18 in., one 36 in., two 12 in., one 18 in., and five donkey-engines, the total nominal horse power of which is estimated at upwards of 1000, with pumps and lifts; one water-wheel, 20 ft. diameter; one ditto, 40 ft. diameter; and 19 steam-boilers, from 25 to 40 ft. long. There are also 15 shafts (the cost of which it is estimated has exceeded £40,000), with commodious buildings and workshops of various kinds. The two largest engines, the 100 in. cylinder, and the 80 in., with their pumps, gearing, buildings, &c., could not be put up for less than £30,000; the machinery at Olive shaft would not cost less than £10,000. The machinery at Walker's, Mostyn, Dyserth, and New Eastern shafts will have cost £25,000 more.

The output of the mine may be stated at from 100 to 150 tons of lead and from 150 to 200 tons of blende per month at present, but when it is drained lower, and a more extended section of it opened through which the finer course of ore (which has yielded so largely above the present bottom for a length of 80 yards) runs, the present output will probably be increased to 300 tons of lead and 250 tons of blende per month, and ground laid open for many years to come, and this has been the experience of the past working of the mine.

The average returns for the past 100 years show a net income exceeding £6000 per annum, and have actually paid £40,750 in dividends during that period; but, by improvements before mentioned, it is safely estimated this will be greatly increased within a very short time from the formation of the new company.

The boilers (with the exception of a small one) are of the old egg-end pattern, consuming an enormous amount of fuel to little purpose, thus occasioning an immense loss, so much so that a practical gentleman who has inspected them for the company estimates the saving capable of being effected in coal, at about one-half the quantity used.

Much improvement is capable of being effected in the dressing of the ores, so much so that it is estimated a saving of 24000 p.a. annum can be made, assuming that 200 tons of lead ore and 200 tons of blende per month be raised.

It is calculated that the contemplated improvement in the boilers and dressing machinery will of themselves yield a handsome dividend on the total capital by saving what is at present wasted. Contracts for the above-named improvements are now being made, and will be proceeded with at once.

It has been stated upon good authority that Talargoch is the best lead mine in the kingdom, and as a strong proof of this, let it be compared with that prolific mine the Van. Talargoch has been worked several hundred years, and the average sinking has not exceeded 4 ft. a year. The Van has been worked five years, and the average sinking is 80 ft. per annum. Talargoch has sold 632 tons of lead, the produce of month's working, the Van has not exceed 500 tons, and there is no reason why Talargoch should not do the same again. Talargoch has probably produced not less than 25 tons of ore for every ton sold from the Van; and the courses of ore are apparently as good as ever at the present bottom of Talargoch.

The mine is working for the new company as from the first day of June last, and yielding returns which can be very much increased, and from the moment of its being taken over by the new company will, it is confidently expected, be earning substantial and steadily-increasing profits as the mine is opened out.

The following contracts have been entered into, and may be seen at the offices of the company's solicitors:—(1) Contract dated the 31st day of July, 1874, between Talargoch Mining Company (Limited) of the first part, J. R. Jones and J. S. Blease, the liquidators of the said company, of the second part, and Henry Austin as promoter on behalf of the new company of the other part. (2) Contract dated the 13th day of August, 1874, between Thomas Viner Clarke of the one part, and the said Henry Austin on behalf of the new company of the other part.

The shareholders in the old company retain a large interest in the new company, and will be represented at the board for three years by two directors nominated by the liquidators.

As the list will only remain open for a limited time, and there are only about 4000 shares to issue, parties wishing to avail themselves of the opportunity of becoming shareholders should do so at once by forwarding the form accompanying the prospectus properly filled up, with a remittance therewith of £1 per share, to the brokers, secretary, or any of the bankers of the company. In case no allotment is made the deposit will be at once returned, and if a smaller number of shares is allotted than applied for the balance of the deposit will be applied on account of the sum due on allotment, and the surplus, if any, returned to the applicant.

LLWYN TEIFY LEAD MINING COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.

Capital £15,000, in 15,000 shares of £1 each.

Fully paid-up, without further call or liability.

Share-warrants to bearer issued for shares on request of any shareholder on payment of stamp duty only.

DIRECTORS.

JOHN WILLIAM WILLIAMSON, Warwick-road, Paddington,

—CHAIRMAN.

CHARLES MORRIS, Bryanston-street, Portman-square.

THOMAS HAZLEDINE, The Parks, Evesham.

HUBERT BARNES RYE, Canonbury Park South.

GEORGE TOMKINS, F.R.Hist.S., 7, Finsbury-square.

MANAGER—T. P. THOMAS, on the mine.

BANKERS.

NATIONAL PROVINCIAL BANK OF ENGLAND, Aberystwith.

SECRETARY—E. SILLIFANT.

OFFICES.

1, GRESHAM BUILDINGS, BASINGHALL STREET, LONDON.

Prospectuses, forms of application for shares, and all information may be obtained at the offices of the company.

PROSPECTUS.

The objects of this company are to purchase and work an extensive mineral property known as the Llwyn Teify Lead Mine, situate in the county of Cardigan, about 14 miles from Aberystwith.

This mine, which is in the richest mining district of the county, is very large, being about one mile long on the course of the lodes, and one mile wide, and its geological formation is all that can be desired.

The sett is held as to the principal part under lease for 21 years, from March 25th, 1870, and the remainder under a continuous lease, at a royalty of one-fourteenth. The deep level in this mine is 50 fms. from surface, and as the adjoining mines to the west drain this property for fully 70 fms. below this level, no pumping machinery will be necessary for many years, whilst ample water-power exists for working the drawing, crushing, and dressing machinery at all seasons of the year.

The ground although easy for working is yet of a character to require but little timber in the shafts and levels.

The sett contains several large and powerful lodes, one of which, known as the Bwlch Gwyn South Lode, has been worked upon and proved down to 50 fms., at which depth fine courses of rich lead ore have been discovered, and are ready to be taken away at a very small cost, and from which a parcel of 10 tons has been dressed and sold.

This lode has produced many thousands of tons of lead ore in the adjoining mines, where it is found to be richer in the bottom or 80 fms. level than above, thereby showing that it improves in depth, and promising well for the future of this company, more particularly as this lode at about 50 fms. further east forms a junction with four other powerful lodes, at which point great deposits of lead ore may confidently be expected.

The other lode, which is known as Pryce's lode, has been proved for a short distance by an adit level and by a sink below the level, in both of which good courses of lead ore are found, and from which a splendid pile is now to be seen at the surface. This lode is of the most promising character, and is well situated for laying open large bodies of ore ground, as by extending the level into the hill a back of 100 fms. in height will be obtained for above a mile in length.

It is estimated that £3000 will suffice for opening and timbering shafts and for the purchase and erection of a water-wheel and machinery for hoisting, crushing, and dressing the ore; upon completion of which regular and profitable returns are expected to be made.

In anticipating the profits likely to be made the directors may be thought too sanguine; therefore they beg to draw attention to the fact that the Llwyn Teify Mines, which are about two miles to the south-west of this mine, have upon an outlay of £7500 given in dividends £225,400, are still paying dividends, and likely to continue to pay for many years to come.

The property has hitherto been worked on the cost-book principle by a few private individuals, who, having sufficiently proved the productiveness of the lodes, have for the purposes of extending operations and working on a large scale disposed of it to the present company for the sum of £3000 in fully paid-up shares of the company, a fact which shows their confidence in the successful future of the undertaking.

The accompanying reports explain more fully the details and prospects of the property, and the directors have no hesitation in expressing their own confidence and in recommending it to the public.

The following is the only contract:—A contract, dated the 28th day of December, 1873, between T. P. Thomas, on behalf of the vendors, of the one part, and George Griffiths, on behalf of this company, of the other part.

REPORTS.

Llwyn Teify Mine.—I have carefully examined the above mine. I find the sett is large, being 1 mile on the run of the lode, the elevation of which is all that can be desired for mining purposes, and almost every other natural facility near at hand. The lodes are embedded in clay-slate formation, highly congenial to the production of lead ores; easy for excavation, and requires but little, if any, timber to support shafts and levels that may be sunk and driven therein.

EASTERN MINE.—At the eastern extremity of your sett an adit level has been started about 7 fathoms from the base of the River Rheidol, which has been extended west into the hill about 11 fathoms on Price's lode, which is a large and powerful lode, being composed of kyllas, crystallised and sugar-spar, blende, and lead ore of rich quality. A winze has been sunk in the bottom of this level, which is producing about 1 ton of rich lead ore per fathom, and no doubt as depth is obtained will further improve; judging from its general character and composition, together with the fact of its producing such fine specimens of ore so near the surface, I have no hesitation in saying it is one of the most promising lodes I have seen in this country, besides which, the advantages for developing this lode are everything that can be desired, the mountains going west rising to a great height, I should say at least 100 fathoms, and operations can be carried on to any extent by driving two or more levels at the same time, and communicating one with the other by winzes or small shafts for ventilation. This I scarcely need tell you is of the greatest importance, and its value in the development cannot be over-estimated. About 50 fathoms to the north of this level an adit has been extended into the hill west of what is called the Nant-y-moch lode, about 40 fathoms. This lode seems to be an immense width, the part driven is presenting a good appearance, and no doubt as the level is extended into the hill, and the cross-cut driven through the whole of the lode, favourable results will be met with.

WESTERN MINE.—This part of the mine has been worked many years since by the ancients to a depth of 30 fathoms from surface on the Bwlch Gwyn south lode by an adit level, which has been cleared by the present company for a very considerable distance. These workings were formerly carried on the cost-book or soft part of the lode, which only was easy for progress, and which, from the appearance of the burrows at surface, must have been very rich; in consequence, the hard or north part of the lode is still standing to surface, which in my opinion is the most productive part. I should, therefore, advise you to strip the lode down to its full width, and no doubt valuable discoveries of ore will be made. The present company have sunk a winze from the bottom of this level about 20 fathoms also on the south part of the lode, which has produced very good lead ore; they have also driven a level from the Bwlch Gwyn Mine at a depth from surface of 50 fathom, which level has been extended to and communicated with the winze, thereby draining and ventilating this part of the mine. This level is also driven on the south or soft part of the lode, and has passed through some good ore ground, to prove which three stopes in different parts of the level have been commenced, which are producing from 15 to 20 cwt. of rich lead ore per fathom, and there is a good run of ore ground gone down in the bottom of this level of equal value. The level being in whole ground to surface for a length already driven of about 75 fms., there is every probability of large bodies of ore being found in the same. The western boundary of your mine joins the eastern boundary of Bwlch Gwyn Mine, and a communication is formed from one mine to the other, thereby causing good ventilation. This part of the mine is also drained by the Great Ystymtyn deep adit, which is about 30 fathoms below the present level, consequently you have the advantage of extending deeper levels when necessary. Looking, therefore, at the facts that there are several other strong lodes running through the whole length of the sett, that your mine can be worked for many years to come without the aid of pumping machinery, and from my experience of the district, having been engaged as agent of several of the best mines here for the last 10 years, I fully believe that a small capital is only required, with judicious management, to make it a valuable property.—September 13th, 1873.

THOS KEMP.

Llwyn Teify Mine.—The Llwyn Teify is the champion lode of Cardiganshire, varying in size from 30 ft. to 60 ft. wide, and has been worked for many miles in length, and produced immediately to the west of you nearly one million sterling worth of lead ore; and having to the east of you the West Esgrig Lode, the Great West Van, and at its eastern extremity the Van Mine. Nowhere else in the lode

has been seen or worked are there finer indications for making enormous quantities of ore than in this grant, as there are no less than four miles of the grant which unite and form a junction with the Llwyn Teify lode at the top of the mountain called Bwlch Gwyn, and these continue together to the extremity of your sett, the River Rheidol, eastward nearly three-fourths, of a mile. It is at these junctions that success in opening mines in this district has always been obtained, and never in one instance, to my knowledge, failed in doing so. I were to give you a more lengthened report, I could add no more than what I have here expressed as to my opinion of your opening out one of the richest and grandest mines ever worked in Cardiganshire. I have, therefore, merely to add that you are well situated as to water for working any machinery required to add to that and that a moderate amount of capital judiciously laid out in developing the property will undoubtedly end in the success I have predicted for it. Goginan, Aberystwith, 13th May, 1874.

ABSAALOM FRANCIS.

Llwyn Teify Mine.—I have been through the old workings on the Bwlch Gwyn lode in this mine. I find the soft part of the lode only has been taken away by the ancients, and from the trials I have made in the various places on the north and hard part I have no doubt of a very large body of rich ore being now standing, and which can be taken away at a very trifling cost. The winze sunk below the workings I find is ore for the whole depth. The 50 fms. level has been driven about 70 fathoms on the south part of the lode and communicated with the winze, thereby draining and ventilating this part of the mine. To prove the ground on the back of this level three stopes have been commenced, which are looking well, producing from 1 to 1½ ton of rich lead ore per fathom. I, therefore, see no reason why the whole of the ground above this should not be equally productive at surface. The adit level driven upon the Nant-y-moch lode, west of the Rheidol, has been extended into the hill about 40 fathoms, producing blende and spots of lead, and it having been driven in soft and disordered ground, it should be pushed on into more settled ground with all speed. This lode is to be seen at surface for a great width—50 to 60 feet—and there is no knowing what may be seen by cross-cutting through the whole of the lode. The south lode, which is about 40 fathoms from the Nant-y-moch level, has been driven upon west about 12 fms. 7 fms. of which have been productive of lead ore, which is now to be seen at surface; this ore speaks for itself. The last 5 fms. have produced good blende and spots of lead ore; and I have no doubt in a few fathoms more we shall be in good ore again, and as we get into the hill we may expect to find it settled and regular. A sink has been commenced below this level to see if the ore holds down; this sink is very promising, producing full 1 ton of rich lead ore fathom, and proving as it deepens. By going west upon this lode you will have a back of 100 fathoms for nearly 1 mile. Looking at the facilities for working the different lodes, and that they are drained by the Aberystwith mines, 70 fathoms below you, present 50 fms. level, consequently requiring no pumping machinery for many years to come, and looking at the ore already discovered, I have not the slightest doubt of this mine proving a very profitable and lasting property. I have been mining in the Llwyn Teify and other mines in this district for the last 40 years, was at the Llwyn Teify Mine when the discovery of the rich body of ore was made by cross-cutting, and I have seen no lodes more likely to make a second Llwyn Teify than Llwyn Teify. You should erect a wheel and crusher, and lay out dressing at once, and upon that being done you may calculate upon regular and profitable returns.—September 12, 1873.

THOS. PRYCE.

To the Directors of the Llwyn Teify Lead Mining Company (Limited). GENTLEMEN,—I hereby request you to allot me shares of £1 each in the above company, and I agree to accept the same, according to the terms of the prospectus.

Name (in full) Address Date Signature

TECHNICAL EDUCATION—No. V.

THE NOVA SCOTIAN SCHOOL OF CIVIL ENGINEERING.

The efforts made during the past few years to arouse the Nova Scotians from that distressing apathy which had proved so obstructive both to their educational and industrial progress have not been fruitless, and it may now reasonably be hoped that the time is not far distant when the mining and civil engineering professions will be as usefully employed in Nova Scotia as they already are in Victoria and New South Wales. That Nova Scotia is becoming recognised as a promising and legitimate field for the employment of British capital cannot be doubted, and nothing can be better calculated to command the confidence of capitalists than to prove to them that it is practicable to place the management of the concerns in which they are interested in the hands of competent and reliable engineers who are their own fellow-subjects, and possess that ample local knowledge without which any large amount of success can scarcely be hoped for. It is the appreciation of these facts that has led to the formation of the School of Civil Engineering in connection with the University of King's College, Windsor, Nova Scotia, and the adjoining provinces will gladly avail themselves of it for securing to their sons that sound professional education thus brought so closely within their reach. That the course may be thrown open to the largest possible number, engineering students are permitted to matriculate without undergoing an examination in the classical subjects required from students in arts, so that candidates for the diploma of C.E. have great facilities for entering upon the three years' course of study which, supplemented by the passing of two university examinations, will entitle them to that distinction.

The curriculum is quite stiff enough to ensure thorough recognition of the honour attaching to the gaining of the diploma, and is at the same time eminently practical in character. The first year's course embraces elementary mathematics, chemistry, experimental physics, one modern continental language, geometrical drawings, and office work. During the second year the studies include advanced mathematics, mathematical physics, mineralogy or geology, civil engineering, office work and field work. And the third year is devoted to applied natural philosophy, civil engineering, office work, field work, geology or mineralogy, practical chemistry, and to engineering excursions. When a student is competent, through knowledge previously acquired, to satisfy the College board in the subjects of the first years course the time necessary to qualify for the diploma is proportionably reduced; but no student can enter upon the third year's course until he has satisfied the examiners in the subjects of the previous two years. The elementary course of mathematics comprises the first six books of Euclid, arithmetic, algebra, including the usual rules to the end of quadratics, proportion, binomial theorem for positive integral exponents, geometrical and arithmetical progression, and the nature and use of logarithms, plane trigonometry to enable the student to solve all cases of triangles; and the advanced course comprises the theory of equations, plane and spherical trigonometry, analytical geometry as far as equations of the second degree, conic sections, and the differential and integral calculus. The first of the two examinations which have to be passed to qualify for the diploma includes both courses of mathematics, experimental physics, mensuration, levelling, mapping, and a modern continental language; whilst the second examination includes engineering, mensuration, levelling and mapping, mathematical physics, applied natural philosophy, chemistry, geology, and mineralogy. From this it would appear that the university authorities have certainly determined to make the diploma worth working for, and both they and the students may be congratulated upon that decision having been come to.

The recent annals of Nova Scotia, perhaps, the most animated and successful for some years, and the new academic year which will shortly commence, promises to be a very prosperous one for the institution. Considering that the School of Civil Engineering had just been finally established, the address delivered at the annuaire just referred to on "The Profession and Duties of a Mining Engineer," by a member of the Board of Governors—Mr. John Rutherford, M.E., a member of the North of England Institute of Mining and Mechanical Engineers—was particularly appropriate. In connection with the University there is the General Williams' prize for Mineralogy applied to Mining, and it naturally touched the dignity of Mr. Rutherford, himself a mining engineer, to find that two only of those who have competed for it have selected an occupation of profession in which their attainments in connection with it will be practically exercised, and in pointing out the desirability of altering this state of things he very properly expressed the hope that the present competitors have been actuated by a higher motive than that of the simple though praiseworthy design to obtain a knowledge of these subjects, or by the creditable, though probably transient eclat of success. A love of the sciences connected with the art of mining, and the intention to make the practice of it the business of his life had, he hoped, spurred each of them to exertion, and stimulated the desire to obtain the prize; and this less for its value than for the passport with which, possessing it, he leaves the college gates, and enters on the practical pursuit of a favourite study. That such a result would attend the competition, that from King's College would proceed the future managers of collieries and mines in Nova Scotia was, doubtless, the object of the eminent founder of the prize, and Mr. Rutherford's address was well calculated to all

in the realisation of that object by endeavouring to induce competitors to enter into the profession of a mining engineer.

Sketching the duties of a mining engineer, and suggesting the course best calculated to give those practical attainments, without which all book knowledge is almost valueless, Mr. Rutherford, after referring to the character of the examination papers implying a knowledge of geology, mineralogy, metallurgy, chemistry, and, indeed, the physical sciences generally, and to the fact that it is too often supposed that mining is a simple art which any person with ordinary intelligence may take up and practice, although in truth it requires for its successful pursuit the application not only of scientific skill but also of much general knowledge, wisely recommends the student to direct his mind to the acquisition of a thoroughly practical knowledge of the operation carried on in and about the mines, observing that in order to have an opportunity of doing this they should on leaving college connect themselves with some competent mine manager for a period of not less than three years. During that time they should devote as much of it as possible to their underground studies. Every operations in the mine should receive their attention, however humble or apparently unimportant, if they wish to perform the duty of a manager in an efficient manner. They will find that there is a right way and a wrong way of doing everything, from the setting of a prop to support the roof to the regulation of the air currents; and unless a manager knows the one from the other, the right from the wrong, he cannot correct error or suggest improvement. Their own intelligence must guide them in the conduct of a mining establishment, and no man can be said to be master of his profession who is unable to detect the incompetency or to correct the errors of judgment of those he employs. And the knowledge that will enable him to do this can only be obtained through a familiarity with the process of every operation. It is not absolutely necessary that he should take every step into his own hands, or that he should undertake duties of minor importance in order to learn the use of the one, or the mode of doing the other, though a brief experience of each will not weaken either his skill or his judgment, but what is desirable is as large an amount as possible of that sort of knowledge which is recognised as the knack of doing a thing, and which is only got by personal experience, or keen observation. And this knowledge of how to do is not all that they will acquire by this attention to details; they will become acquainted with another important item of mining knowledge; they will learn what it costs to do it, and will find on entering on their duties as managers that their employers are very apt to apply this test of their capabilities, and to estimate their worth a great deal in accordance with their own ideas of the value of dollars and cents.

Combining the practical and the theoretical, they will be steadily bringing the seeds of that knowledge the growth of which, as Mr. Rutherford remarked, is limited only by the years that may be allotted to them. Having assisted them to appreciate the value of technical education, and form an idea of the scope which the profession of a mining engineer affords for the exercise of their scientific attainments, he proceeded to explain that as manager one is expected to take cognizance of every transaction connected with the mine. A certain amount of mercantile information is necessary to enable one to understand accounts and the method of keeping them, so that you may know not how to make but how to detect a crooked balance-sheet, however attractively garnished. With regard to general management, he remarks that there is in some men a natural aptitude for governing others; they observe, as it were, intuitively, the weak and the strong points in the character of those under their control, and they are ever ready with remedial measures on occasion may arise. And he recommends the manager to deal with the employed in a spirit of fairness and justice; respect their right to make the most of their only capital, their labour; and in accordance with the regulation of wages by the natural law of supply and demand, concede without reluctance a just advance and exact without severity a necessary reduction. One great aid in dealing with workmen will be found in an intimacy with them. Make their social position a subject of solicitude, cultivate their desire to take counsel of you, take an interest in them and their families, make their houses as comfortable as possible, and encourage the deserving by advancing them in position. The condition of their dwellings has much to do with the permanency of their service. Give them something about their home in addition to their family ties, to attach them to it, and they will be less likely to be unreasonable in their demands, and more careful to avoid complaint. Nor should their amusements be deemed unworthy your attention; supply them occasionally not only with the opportunity but also with the means of enjoying a holiday.

Turning to the mineral resources of Nova Scotia, and the circumstances bearing on their development, he remarks that with a gold-mining region, for he does not doubt that nearly the whole of it may be so termed, upwards of 200 miles in width, with nearly a dozen coal districts of more or less magnitude, some of them containing seams of unusual thickness, and with a variety of quality adapted to domestic and commercial requirements, with in most cases unsurpassable harbours, at which the produce of the mines may be shipped, and with a variety of minerals that need probably a more extensive development to establish their great value; with all these and other important advantages it is to be supposed that this redundancy of mineral wealth is to remain much longer a hidden treasure, a forbidden fruit, or that the mistaken policy, the selfish pique of a great people is to continue for ever? He has some faith in commercial sagacity than to believe that the many natural advantages of Nova Scotia can be much longer ignored, or that the enterprise which opened her mines was but the effervescence of a commercial energy that no longer exists. And glancing at a few of these advantages as regards her mineral resources, he remarks that the geographical position of Nova Scotia cannot but make the most cursory observer as a peculiarly fortunate one, and he furnishes details which can leave no doubt as to the accuracy of his views. After pointing out her enormous carboniferous wealth, he truly states that of the other minerals which have been proved to exist in the Province little can yet be said. Manganese is worked to a small extent, copper and lead have been found in many localities, but no steady operations have yet been carried on. Iron, as is known, has been manufactured in Colchester county for several years, and that it exists in large quantities in various parts of Nova Scotia and Cape Breton there is now little reason to doubt.

And of the gold fields, he adds, what can be said? Much, did time permit; for notwithstanding the somewhat depressed condition of old mining at present he is not without hope of a considerable revival and extension of operations at no distant period. With a tract of country not less than 400 square miles in extent, and over a large proportion of which the rock formation is auriferous, who can doubt that it needs but the application of scientific and practical skill for its successful and lucrative development? Mining in the Province is in its infancy; the workings in none of the new mines are yet of much extent, and the underground operations are, therefore, comparatively simple, and not difficult to conduct. As they become enlarged, however, greater skill and care will be necessary, and a consequent superior knowledge will, therefore, be required. The proper ventilation of the mine, the careful yet economical conduct of all the operations on a large scale, need something more than the mere knowledge of the use of tools, or the value of labour. And he appropriately concluded by remarking that it was during their residence as students in King's College, Windsor, that many of the future managers of mines in Nova Scotia should lay the foundation of a successful career; and it is the remembrance of their exertions there to obtain the honourable distinction of prize holder that should be to them hereafter a source of delightful recollection, and the link of love for and pride in their Alma Mater.

Now, there is an amount of vigour in Mr. Rutherford's address which is most exhilarating, and the contrast which the sentiments therein expressed form to the apathy noticeable throughout the Province a few years since cannot but be regarded as highly encouraging, especially when taken in connection with the liberal spirit displayed by the University authorities in the establishment of the school of Civil Engineering. This gratifying change was well followed up by the willing adoption of the Rev. Stanley Boyd's reso-

lution at the last annual meeting of the Alumni of King's College, the effect of which will be to increase considerably the number of students by ensuring the attendance of all who are prepared to profit by the educational facilities offered; so that it may fairly be hoped that the University will henceforth prove as useful in promoting the industrial and commercial prosperity of the Province as it has hitherto been in caring for its literary and religious welfare.

THE LATE SIR JOHN RENNIE.

Sir John Rennie, C.E., past President of the Institution of Civil Engineers, was born Aug. 30, 1794. He first assisted his father, the late Mr. John Rennie, in building both Southwark and Waterloo bridges. After the death of his father, in 1821, he succeeded him as engineer to the Admiralty, a post he held for ten years. Among his more important works are London Bridge, for which he received the honour of knighthood, Sheerness Dockyard, the completion of Ramsgate Harbour and Plymouth Breakwaters (commenced by his father), the Earl of Lonsdale's docks at Whitehaven, a portion of those of Cardiff, and the carrying out for a number of years the great system of drainage and land reclamation in the Lincolnshire fens. He was also the author of a noble work on "Harbours," of which Her Majesty was graciously pleased to accept the dedication, and for which he received tokens of honour from their imperial majesties the Emperors of Russia and Austria; also a monograph on "Plymouth Breakwater," and a small "History of Engineering," in the form of a Presidential Address to the Institution of Civil Engineers. In conjunction with his late brother, Mr. G. Rennie, he contributed to introduce the screw propeller into the navy, and erected the machinery for the mints of Calcutta, Bombay, and Mexico; they also erected the Royal Clarence Victualling Yard, at Plymouth, and Sir J. Rennie was the first to perceive the uses of the diving-bell in engineering works.

Sir J. Rennie was admittedly the highest authority on all subjects connected with hydraulic engineering, harbours, canals, drainage, irrigation, the storage of water, and the management of rivers. His pamphlets on "Drainage of Lombardy" having attracted the notice of the Italian Premier, Signor Litta, the latter induced his Majesty the King of Italy to confer upon him the order of St. Maurice and St. Lazare. Sir John long possessed a wide reputation on the Continent, as may be gathered not only from the above remarks, but from the fact that he constructed the harbour of Ponte Delza, in the Azores; he was a knight of the Tower and Sword of Portugal, and of the Wasa of Sweden; he was a member of the Academy of Science of Stockholm, and also of the Austrian Society of Civil Engineers. Sir John was further well versed in general society and literature, and besides belonging to most of the scientific and learned societies in the metropolis, he was long an active member of the Royal Society and the Meteorological Committee, one of the council and also Chairman of the Juries at the Exhibition, 1862. Of late years he had almost entirely retired from active life, and died on Sept. 3. His kindness of heart won him many friends, and he has left but few enemies.

PUBLIC COMPANIES LAW—THE COMMANDITE SYSTEM.

Although the commandite system is not recognised in this country, nearly all its advantages can be secured by a private trader under the "Sleeping Partners Act" (28-29 Vic., c. 86), which enacts that—

- 1.—The advance of money by way of loan to a person engaged or about to engage in any trade or undertaking upon a contract in writing with such person that the lender shall receive a rate of interest varying with the profits, or shall receive a share of the profits arising from carrying on such trade or undertaking, shall not, of itself, constitute the lender a partner with the person or the persons carrying on such trade or undertaking, or render him responsible as such.
- 2.—No contract for the remuneration of a servant or agent of any person engaged in any trade or undertaking by a share of the profits of such trade or undertaking shall, of itself, render such servant or agent responsible as a partner therein, nor give him the rights of a partner.
- 3.—No person being the widow or child of the deceased partner of a trader, and receiving by way of annuity a portion of the profits made by such trader in his business, shall, by reason only of such receipt, be deemed to be a partner of or to be subject to any liabilities incurred by such trader.
- 4.—No person receiving by way of annuity or otherwise a portion of the profits of any business, in consideration of the sale by him of the goodwill of such business, shall, by reason only of such receipt, be deemed to be a partner of or to be subject to the liabilities of the person carrying on such business.
- 5.—In the event of any such trader as aforesaid being adjudged a bankrupt, or taking the benefit of any Act for the Relief of Insolvent Debtors, or entering into an arrangement to pay his creditors less than 20s. in the £, or dying in insolvent circumstances, the lender of any such loan as aforesaid shall not be entitled to recover any portion of his principal or of the profits or interest payable in respect of such loan, nor shall any such lender of a goodwill as aforesaid be entitled to recover any such profits as aforesaid until the claims of the other creditors of the said trader for valuable consideration in money or money's worth have been satisfied.
- 6.—In the construction of this Act the word "person" shall include a partnership firm, a joint-stock company, and a corporation.

It will be noticed that the advance must be by way of loan. The appointment of a committee of lenders, or its equivalent, to prevent the misapplication or injudicious application of the moneys lent, would be excessively dangerous, as the borrowers and lenders would thus become a common law partnership with unlimited liability; they would cease to be sleeping partners, and would be (both borrowers and lenders) persons associated together for the purpose of trade; and by section 4 of the "Companies Act, 1862" they could not without registration thereunder carry on the business of banking if more than ten in number, or any other business if more than twenty in number. In the present state of commercial morality it would obviously be unwise to entrust the capital of a company to the discretion of an individual, especially under an Act which affords no facility for stopping the business by liquidation, however ruinous it may be to the lenders for it to continue. The Act authorises the making of a loan to a firm, company, or corporation, but does not authorise the association of lenders in order to evade the Companies Acts. It is essential that capitalists should exercise the utmost caution in interfering with the business management if they lend money under the Sleeping Partners Act.

COMMISSIONERS OF PATENTS' REPORT.—The report just issued, shows that in 1873 there were 4294 applications for patents, and of these 2910 were completed. The third year's duty, 50%, was paid on 737 patents, and the seventh year's duty, 100%, was paid on 232 patents. The most interesting part of the report is the renewed reference to the suggestion made 10 years since to remove the commissioners' offices to Fife House and Gardens, Whitehall, as to have transferred them to South Kensington, or any other country district near London, would have been more inconvenient to inventors, patent agents, and all others using the Government office, than Manchester, or any other place where manufactures are carried on. The report states that the readers in the library being of the class of scientific persons, barristers, mechanical engineers, chemists, inventors, skilled workmen in the various factories, solicitors, and patent agents, it is obvious that the readers should be enabled to read the books and examine the machines and models at the same time and in the same place, and, consequently, that the patent office, public library, and museum should be either under the same roof or in very close proximity, and also that the spot to be selected should be of easy access to the class of persons above referred to. This was written in 1864, yet the circumstances are little altered, except that there is a better chance at present for a site near Charing Cross. The museum has always appeared to be a most useless and unnecessarily expensive appendage to the Patent Office, so that its location at South Kensington is no inconvenience to anyone; but the heavy surplus accumulating each year in the hands of commissioners, notwithstanding the most wasteful expenditure in every possible direction, fully justifies inventors in agitating for the immediate reduction of all patent fees to one-fifth their present amount. The patent system is one which requires thorough investigation, both in the interest of inventors and manufacturers.

MANUAL OF METALLURGY.—The more general introduction of science teaching in schools has necessitated the preparation of an entirely new style of class-book—a treatise giving a correct outline of the subject, in language readily intelligible to boys, and so arranged as to form a framework which can easily be filled up with details. The author of the present volume ("A Manual of Metallurgy," By W. HENRY GREENWOOD, F.C.S., A.R.S.M. Vol. I. London and Glasgow: William Collins, Son, and Company) has endeavoured to present the student with a condensed and succinct account of the theory and practice involved in the varied operations comprised in the metallurgy of those metals which are of general application in the arts and manufactures, and to this end has utilised Dr. Percy's, as well as notes taken at his lectures, whilst, amongst other works, he has perused with advantage the "Handbuch der Metallurgischen," and other more generally known books. Wherever the information may have come from, it is well calculated to meet the requirements of the student. The present volume, containing the first half of the treatise, embraces the introductory portion, in which the various properties of metal, metallurgical terms, fuel, &c. refers to iron and steel, tin, antimony, arsenic, bismuth, and platinum. The metallurgy of iron and steel is very fully treated of, and illustrations are given in elucidation of the descriptions

of the Rachtette furnace, Siemens' puddling furnace and gas producer, Danks' revolving puddling furnace, the Bessemer and Heaton's converters; and in connection with the manufacture of pig-iron, the hot-blast stoves of Cowper, Whitwell, and others are described, showing that the information has been brought down to the latest date. As a class-book Mr. Greenwood's work is certainly the cheapest and most complete yet published, and will prove equally acceptable to both the student preparing for the technical examination of the Science and Art Department and to young men engaged in ironworks. The second volume is to complete the work, so that a really good metallurgical treatise will be obtainable for 5s., which is sufficiently low to ensure a very large circulation.

LLWYN TEFY LEAD MINING COMPANY.—The prospectus of this company has been issued, and appears in our columns this day, with a capital of 15,000*l.* in shares of 1*l.* each, 8000 of which are taken up by the vendors in lieu of cash for the purchase of the property, and 7000 are to be issued to the public to provide capital for the further development of the mines, erecting machinery, &c. The mines are situated in the richest mining district of Cardiganshire, and being drained by neighbouring mines can be worked without the aid of pumping machinery at all seasons of the year. The mines having been worked by a few private parties for the last three years, and discoveries of ore having been made sufficient to justify the erection of machinery, and extending the operations, there are not the usual risks and uncertainty attending mining operations in untried ground; on the contrary, in a practical point of view there is every prospect of immediate and regular returns of ore being made. The capital of the company may appear small, but it is considered ample; and many of the companies which have gone on the careful and quiet principle have made profits far exceeding those of greater pretensions. The undertaking deserves attention, and it is a really substantial proof of the faith of the vendors in the results of the extended working that they take the whole of their purchase-money in paid-up shares.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

ANGLO-ITALIAN MACCARONI COMPANY (Limited).—Capital 150,000*l.*, in 2*l.* shares. To take over the business of Messrs. Ray and Co., of St. Pancras.

LONSDALE LEAD MINING COMPANY (Limited).—Capital 10,000*l.*, in 5*l.* shares. To acquire mining property in the County of Westmoreland. The subscribers (who take one share each) are—W. Paton, Rock Ferry; Walter Eddy, Llangollen; J. Nancarrow, 31, James-street, Liverpool; J. Hallows, Liverpool; R. Hardman, Liverpool; and C. Saxelby, Shrewsbury.

BRITISH MINING AND MILLING COMPANY (Limited).—Capital 100,000*l.*, in 5*l.* shares. To carry on mining operations in Nevada. The subscribers (who take one share each) are—W. C. Sargeant, Surbiton; W. R. M. Gassett, 77, Cannon-street; W. Tak, Warwick-street, Pimlico; E. Homan, Surbiton Hill; T. J. Bewick, 4, Broad Sanctuary; J. B. R. Johnson, Elan Villa, Teddington; and J. G. Fankshaw, Halkin-street, Belgrave-square.

MANTR MINING COMPANY (Limited).—Capital 50,000*l.*, in 5*l.* shares. To carry on mining operations in California. The subscribers (who take one share each) are—H. R. Hyndman, 34, St. George's-road, Regent's Park; G. A. Henty, St. Anne's Villa, Notting Hill; J. C. Hutchinson, Wellington-street; S. G. Martin, St. Michael's Buildings; C. F. Hunter, 6, Portman-street, W.; A. J. Bedford, 12, Russell-terrace, Brixton; and H. H. Hyndman, Devonshire-street, W.

WEST SOMERSET CHEMICAL AND MINING COMPANY (Limited).—Capital 6000*l.*, in 10*l.* shares. For the purchase of the chemical works known as the Wood Works, Kingsbrompton, Somerset. The subscribers are—M. Bayliss, Ashfield House, Wolverhampton, 115; W. Bayliss, Wolverhampton, 115; S. Bayliss, Wolverhampton, 50; Thomas Lomas, Minehead, Somerset, 115; S. Marsh, Wolverhampton, 100; W. Bayliss, Torquay, 5; and E. Jones, Amhurst-road, Hackney, 115.

FINANCIAL AND INVESTORS' PROTECTION ASSOCIATION (Limited).—Capital 1,000,000*l.*, in 1*l.* shares. The subscribers to this company (who take one share each) are—J. E. Symons, Markham-street, Chelsea; J. Paultet, Earl-street, Finsbury; W. H. Treadgold, Westmoreland-road, Waltham; H. Ficknell, Peckham; F. B. Macdonald, Penn-road Villa, Holloway; W. N. Thompson, Neville-road, N.W.; G. A. Brown, 19, Budge-row, E.C.

WHITWORTH AND COMPANY (Limited).—Capital 150,000*l.*, in 10*l.* shares. To acquire cotton mills, &c., near Halifax, Yorkshire. The subscribers (who take one share each) are—J. W. Whitworth, Halifax; J. Wells, Luddenden; W. Haddon, Halifax; J. Lightowler, Halifax; J. S. Lees, Halifax; R. Haddon, Halifax; F. Walker, Halifax.

OSWESTRY COAL AND BRICK COMPANY (Limited).—Capital 30,000*l.*, in 10*l.* shares. For the acquisition of a colliery and brickworks at Oswestry. The subscribers (who are all of Manchester, and take one share each) are—Thomas S. Jenkins, 11, York-street; H. Atkinson, Leek; R. B. Brilley, Cannon-street; J. Allan, Market-street; A. Rowbotham, Cannon-street; J. Littlewood, York-street.

SOUTH-EASTERN BONDED WAREHOUSES AND WHARF COMPANY (Limited).—Capital 60,000*l.*, in 10*l.* shares. To acquire bonded warehouses in the parish of St. Saviour, Southwark. The subscribers (who take one share each) are—Thomas Linsdell, 1, Gresham Buildings; G. Goward, Clapham; Clarence Harcourt, 8, Moorgate-street; R. H. Moore, Regent's Park-road; W. Brooke, 11, Old Jewry; Robt. J. Macarthur, Moorgate-street; J. Lifford, Gresham Buildings.

CATT BROTHERS (Limited).—Capital 30,000*l.*, in 5*l.* shares. To acquire the goodwill of Messrs. Catt Brothers, of Ipswich, Woodbridge, and Colchester, coach builders.

TUNBRIDGE IRON AND BOILER WORKS COMPANY (Limited).—Capital 50,000*l.*, in 10*l.* shares. To purchase the Tunbridge Ironworks, at Huddersfield. The subscribers are—H. Bray, 7, Lincoln-street, Nottingham, 50; J. S. Gilpin, Baker-street, Nottingham, 50; G. R. Cresswell, Nottingham, 12; F. Allen, Leeds, 50; R. Fletcher, Bradford, 50; W. J. Booser, Lloyd-street, Leeds, 1; J. C. Maleshir, Leeds, 1.

GENERAL SHARE TRUST COMPANY (Limited).—Capital 250,000*l.*, in 24,800 "A" shares of 10*l.* and 2000 "B" shares of 1*l.* For the investment of funds in shares and debentures, and the establishment of undertakings both at home and abroad. The subscribers (who take one share each) are—T. Jervis, 3, Knight-street, Cheshire; W. Goodall, Eagle-terrace, Starch Green; C. G. Phillips, Lush-street; A. R. Thane, 22, Westbourne-terrace; C. Barlow, 97, Piccadilly; T. D. Whitehall, 18, Queen Victoria-street; and C. Castello, 40, Howland-lane.

Meetings of Public Companies.

PARYS MOUNTAIN MINES COMPANY.

The eighth general meeting of shareholders was held at the offices, St. Helen's-place, Bishopsgate-street, yesterday (Friday),

Mr. J. Y. WATSON in the chair.

Mr. F. R. WILSON (the secretary) read the notice convening the meeting.

The report of the directors (referred to last week) stated that of the 5000 preference shares authorised to be issued on March 17 not one was applied for or allotted; and as it is absolutely necessary that the company should have some cash in hand as working capital, they advise the shareholders to pass a resolution suspending the issue of the preference shares until sanctioned by a further special resolution of the company, and authorising the allotment of the unused shares created by a resolution passed on Jan. 31, and confirmed on Feb. 17, 1873. When the preference shares were created in March, and which it is now considered advisable not to issue, a resolution was passed that the unallotted portion of the 12,000 additional shares created in January, 1873, should not be issued "unless and until the same be directed by a further special resolution of the company." It is therefore, proposed to pass such a resolution at this meeting.

The reports of the agents show that only a better price for copper is required to make the mines pay well from the ores raised from them. The directors are further in treaty with some capitalists interested in the new process for returning poor copper ores, to let them the mountain of halvens, or poor ores, on tribute; and if the arrangement is carried out it will give a good monthly profit to the company without any trouble or expense whatever. Of these halvens—chiefly accumulated at the time when the mine was yielding enormous profits from the richest portions of the ores—there is almost an unlimited supply, but at present they are not yielding anything to the company beyond aiding the precipitate pits by the water which flows from them after heavy rains.

The CHAIRMAN said that at the meeting in February the ores in reserve were estimated at 6000*l.*; there had since been sold 3000*l.* worth; and the reserves had been not reduced; 140 tons of copper had been sold since the accounts were made up, and 300 tons of native ochre had been sold that morning, at 10s. per ton. With regard to the new process, a number of gentlemen interested therein had made a proposition to the company to take the poor ores at a tribute of 17s. in the *l.*, but the directors thought that was not quite enough, and asked 15s. in the *l.*. The matter was still under treaty, and if carried out no doubt it would prove of considerable advantage to the company. At the same time, the directors must have money to go on with, as they were accustomed to pay money for everything, whilst the returns of the company were sometimes not realised in cash for three months, and although there were assets over liabilities to the extent of 3000*l.* it was not in cash. The directors proposed to rescind the resolution, passed some time since, issuing the preference shares, and to substitute the resolutions contained in the notice calling the meeting, and he believed there would be no difficulty in getting rid of the shares mentioned therein. He moved that the report and accounts be received and adopted.—Mr. HEATH seconded the resolution, which was put to the meeting and carried without any discussion.

The CHAIRMAN then moved the following resolution:—"That the directors be authorised and empowered to receive applications for and to allot all or any of the 7077 (3*l.*) shares, which, in accordance with the special resolution passed at the extraordinary general meeting held on March 2, 1874, and confirmed on March 17, 1874, still remain unissued."

The Rev. A. COOPER seconded the resolution.

The CHAIRMAN, in answer to Mr. Heath, said the directors had never had any application for any of the preference shares.

Mr. BRAVE, a director, said that all the directors were ready to take their proper

London: CHARLES GRIFFIN AND COMPANY, 10, Stationers' Hall-court.

The recent encenia was, perhaps, the most animated and successful for some years, and the new academical year which will shortly commence, promises to be a very prosperous one for the institution. Considering that the School of Civil Engineering had just been finally established, the address delivered at the encenia just referred to on "The Profession and Duties of a Mining Engineer" by a member of the Board of Governors—Mr. John Rutherford, F.E., a member of the North of England Institute of Mining and Mechanical Engineers—was particularly appropriate. In connection with the University there is the General Williams' prize for Mineralogy applied to Mining, and it naturally touched the dignity of Mr. Rutherford, himself a mining engineer, to find that two only of those who have competed for it have selected an occupation or profession in which their attainments in connection with it will be practically exercised, and in pointing out the desirability of altering this state of things he very properly expressed the hope that the present competitors have been actuated by a higher motive than that of the simple though praiseworthy design to obtain a knowledge of these subjects, or by the creditable, though probably transient eclat of success. A love of the sciences connected with the arts of mining, and the intention to make the practice of it the basis of his life had, he hoped, spurred each of them to exertion, and stimulated the desire to obtain the prize; and this less for its value than for the passport with which, possessing it, he leaves the college gates, and enters on the practical pursuit of a favourite study. At such a result would attend the competition, that from King's College would proceed the future managers of collieries and mines in Nova Scotia was, doubtless, the object of the eminent founder of the prize, and Mr. Rutherford's address was well calculated to all

in the realisation of that object by endeavouring to induce competitors to enter into the profession of a mining engineer.

Sketching the duties of a mining engineer, and suggesting the course best calculated to give those practical attainments, without which all book knowledge is almost valueless, Mr. Rutherford, after referring to the character of the examination papers implying a knowledge of geology, mineralogy, metallurgy, chemistry, and, indeed, the physical sciences generally, and to the fact that it is too often supposed that mining is a simple art which any person with ordinary intelligence may take up and practice, although in truth it requires for its successful pursuit the application not only of scientific skill but also of much general knowledge, wisely recommends the student to direct his mind to the acquisition of a thoroughly practical knowledge of the operation carried on in and about the mines, observing that in order to have an opportunity of doing this they should on leaving college connect themselves with some competent mine manager for a period of not less than three years. During that time they should devote as much of it as possible to their underground studies. Every operations in the mine should receive their attention, however humble or apparently unimportant, if they wish to perform the duty of a manager in an efficient manner. They will find that there is a right way and a wrong way of doing everything, from the setting of a prop to support the roof to the regulation of the air currents; and unless a manager knows the one from the other, the right from the wrong, he cannot correct error or suggest improvement. Their own intelligence must guide them in the conduct of a mining establishment, and no man can be said to be master of his profession who is unable to detect the incompetency or to correct the errors of judgment of those he employs. And the knowledge that will enable him to do this can only be obtained through a familiarity with the process of every operation. It is not absolutely necessary that he should take every step into his own hands, or that he should undertake duties of minor importance in order to learn the use of the one, or the mode of doing the other, though a brief experience of each will not weaken either his skill or his judgment, but what is desirable is as large an amount as possible of that sort of knowledge which is recognised as the knack of doing a thing, and which is only got by personal experience, or keen observation. And this knowledge of how to do it is not all that they will acquire by this attention to details; they will become acquainted with another important item of mining knowledge; they will learn what it costs to do it, and will find on entering on their duties as managers that their employers are very apt to apply this test of their capabilities, and to estimate their worth a great deal in accordance with their own ideas of the value of dollars and cents.

Combining the practical and the theoretical, they will be steadily laying the seeds of that knowledge the growth of which, as Mr. Rutherford remarked, is limited only by the years that may be allotted to them. Having assisted them to appreciate the value of technical education, and form an idea of the scope which the profession of a mining engineer affords for the exercise of their scientific attainments, he proceeded to explain that as manager one is expected to take cognizance of every transaction connected with the mine. A certain amount of mercantile information is necessary to enable one to understand accounts and the method of keeping them, so that you may know not how to make but how to detect a book balance-sheet, however attractively garnished. With regard to general management, he remarks that there is in some men a natural aptitude for governing others; they observe, as it were intuitively, the weak and the strong points in the character of those under their control, and they are ever ready with remedial measures on occasion may arise. And he recommends the manager to deal with the employed in a spirit of fairness and justice; respect their right to make the most of their only capital, their labour; and in accordance with the regulation of wages by the natural law of supply and demand, concede without reluctance a just advance and exact without severity a necessary reduction. One great aid in dealing with workmen will be found in an intimacy with them. Make their social position a subject of solicitude, cultivate their desire to take counsel of you, take an interest in them and their families, make their houses as comfortable as possible, and encourage the deserving by advancing them in position. The condition of their dwellings has much to do with the permanency of their services. Give them something about their home in addition to their family ties, to attach them to it, and they will be less likely to be unreasonable in their demands, and more careful to avoid complaint. Nor should their amusements be deemed unworthy your attention; supply them occasionally not only with the opportunity but also with the means of enjoying a holiday.

Turning to the mineral resources of Nova Scotia, and the circumstances bearing on their development, he remarks that with a gold-bearing region, for he does not doubt that nearly the whole of it may be so termed, upwards of 200 miles in width, with nearly a dozen coal districts of more or less magnitude, some of them containing seams of unusual thickness, and with a variety of quality adapted to domestic and commercial requirements, with in most cases unsurpassable harbours, at which the produce of the mines may be shipped, and with a variety of minerals that need probably but a more extensive development to establish their great value; with all these and other important advantages it is to be supposed that this redundancy of mineral wealth is to remain much longer a hidden treasure, a forbidden fruit, or that the mistaken policy, the selfish pique of a giant people is to continue for ever? He has some faith in commercial sagacity than to believe that the many natural advantages of Nova Scotia can be much longer ignored, or that the enterprise which opened her mines was but the effervescence of a commercial energy that no longer exists. And glancing at a few of these advantages as regards her mineral resources, he observes that the geographical position of Nova Scotia cannot but make the most cursory observer as a peculiarly fortunate one, and he furnishes details which can leave no doubt as to the accuracy of his views. After pointing out her enormous carboniferous wealth, he truly states that of the other minerals which have been proved to exist in the Province little can yet be said. Manganese is worked to a small extent, copper and lead have been found in many localities, but no steady operations have yet been carried on. Iron, as you know, has been manufactured in Colchester county for several years, and that it exists in large quantities in various parts of Nova Scotia and Cape Breton there is now little reason to doubt.

And of the gold fields, he adds, what can be said? Much, did time permit; for notwithstanding the somewhat depressed condition of old mining at present he is not without hope of a considerable revival and extension of operations at no distant period. With a tract of country not less than 400 square miles in extent, and over large proportion of which the rock formation is auriferous, who can doubt that it needs but the application of scientific and practical skill for its successful and lucrative development? Mining in the Province is in its infancy; the workings in none of the new mines are yet of much extent, and the underground operations are, therefore, comparatively simple, and not difficult to conduct. As they become enlarged, however, greater skill and care will be necessary, and a consequent superior knowledge will, therefore, be required. The proper ventilation of the mine, the careful yet economical conduction of all the operations on a large scale, need something more than the mere knowledge of the use of tools, or the value of labour. And he appropriately concluded by remarking that it was during their residence as students in King's College, Windsor, that many of the future managers of mines in Nova Scotia should lay the foundation of a successful career; and it is the remembrance of their exertions there to obtain the honourable distinction of prize, and the link of love and pride in their Alma Mater.

Now, there is an amount of vigour in Mr. Rutherford's address which is most exhilarating, and the contrast which the sentiments therein expressed form to the apathy noticeable throughout the Province a few years since cannot but be regarded as highly encouraging, especially when taken in connection with the liberal spirit displayed by the University authorities in the establishment of the school of Civil Engineering. This gratifying change was well followed up by the willing adoption of the Rev. Stanley Boyd's reso-

lution at the last annual meeting of the Alumni of King's College, the effect of which will be to increase considerably the number of students by ensuring the attendance of all who are prepared to profit by the educational facilities offered; so that it may fairly be hoped that the University will hereafter prove as useful in promoting the industrial and commercial prosperity of the Province as it has hitherto been in caring for its literary and religious welfare.

THE LATE SIR JOHN RENNIE.

Sir John Rennie, C.E., past President of the Institution of Civil Engineers, was born Aug. 30, 1794. He first assisted his father, the late Mr. John Rennie, in building both Southwark and Waterloo bridges. After the death of his father, in 1821, he succeeded him as engineer to the Admiralty, a post he held for ten years. Among his more important works are London Bridge, for which he received the honour of knighthood, Sheerness Dockyard, the completion of Ramsgate Harbour and Plymouth Breakwaters (commenced by his father), the Earl of Lonsdale's docks at Whitehaven, a portion of those of Cardiff, and the carrying out for a number of years the great system of drainage and land reclamation in the Lincolnshire fens. He was also the author of a noble work on "Harbours," of which Her Majesty was graciously pleased to accept the dedication, and for which he received tokens of honour from their imperial majesties the Emperors of Russia and Austria; also a monograph on "Plymouth Breakwater," and a small "History of Engineering," in the form of a Presidential Address to the Institution of Civil Engineers. In conjunction with his late brother, Mr. G. Rennie, he contributed to introduce the screw propeller into the navy, and erected the machinery for the mints of Calcutta, Bombay, and Mexico; they also erected the Royal Clarence Victualling Yard, at Plymouth, and Sir J. Rennie was the first to perceive the uses of the diving-bell in engineering works.

Sir J. Rennie was admitted the highest authority on all subjects connected with hydraulic engineering, harbours, canals, drainage, irrigation, the storage of water, and the management of rivers. His pamphlets on "Drainage of Lombardy" having attracted the notice of the Italian Premier, Signor Litta, the latter induced his Majesty the King of Italy to confer upon him the order of St. Maurice and St. Lazare. Sir John long possessed a wide reputation on the Continent, as may be gathered not only from the above remarks, but from the fact that he constructed the harbour of Ponte Dezala, in the Azores; he was a knight of the Tower and Sword of Portugal, and of the Wasa of Sweden; he was a member of the Academy of Science of Stockholm, and also of the Austrian Society of Civil Engineers. Sir John was further well versed in general society and literature, and besides belonging to most of the scientific and learned societies in the metropolis, he was long an active member of the Royal Society and the Meteorological Committee, one of the council and also Chairman of the Juries at the Exhibition, 1862. Of late years he had almost entirely retired from active life, and died on Sept. 3. His kindness of heart won him many friends, and he has left but few enemies.

PUBLIC COMPANIES LAW—THE COMMANDITE SYSTEM.

Although the commandite system is not recognised in this country, nearly all its advantages can be secured by a private trader under the "Sleeping Partners Act" (28-29 Vic., c. 86), which enacts that—

- 1.—The advance of money by way of loan to a person engaged or about to engage in any trade or undertaking upon a contract in writing with such person that the lender shall receive a rate of interest varying with the profits, or shall receive a share of the profits arising from carrying on such trade or undertaking, shall not, of itself, constitute the lender a partner with the person or the persons carrying on such trade or undertaking, or render him responsible as such.
- 2.—No contract for the remuneration of a servant or agent of any person engaged in any trade or undertaking by a share of the profits of such trade or undertaking shall, of itself, render such servant or agent responsible as a partner therein, nor give him the rights of a partner.
- 3.—No person being the widow or child of the deceased partner of a trader, and receiving by way of annuity a portion of the profits made by such trader in his business, shall, by reason only of such receipt, be deemed to be a partner of or to be subject to any liabilities incurred by such trader.
- 4.—No person receiving by way of annuity or otherwise a portion of the profits of any business, in consideration of the sale by him of the goodwill of such business, shall, by reason only of such receipt, be deemed to be a partner of or to be subject to the liabilities of the person carrying on such business.
- 5.—In the event of any such trader as aforesaid being adjudged a bankrupt, or entering into an arrangement to pay his creditors less than 20s. in the £, or dying in insolvent circumstances, the lender of any such loan as aforesaid shall not be entitled to recover any portion of his principal or of the profits or interest payable in respect of such loan, nor shall any such vendor of a goodwill as aforesaid be entitled to recover any such profits as aforesaid until the claims of the other creditors of the said trader for valuable consideration in money or money's worth have been satisfied.
- 6.—In the construction of this Act the words "person" shall include a partnership firm, a joint-stock company, and a corporation.

It will be noticed that the advance must be by way of loan. The appointment of a committee of lenders, or its equivalent, to prevent the misapplication or injudicious application of the moneys lent, would be excessively dangerous, as the borrowers and lenders would thus become a common law partnership with unlimited liability; they would cease to be sleeping partners, and would be (both borrowers and lenders) persons associated together for the purpose of trade; and by section 4 of the "Companies Act, 1862" they could not without registration thereunder carry on the business of banking if more than ten in number, or any other business if more than twenty in number. In the present state of commercial morality it would obviously be unwise to entrust the capital of a company to the discretion of an individual, especially under an Act which affords no facility for stopping the business by liquidation, however ruinous it may be to the lenders for it to continue. The Act authorises the making of a loan to a firm, company, or corporation, but does not authorise the association of lenders in order to evade the Companies Acts. It is essential that capitalists should exercise the utmost caution in interfering with the business management if they lend money under the Sleeping Partners Act.

COMMISSIONERS OF PATENTS' REPORT.—The report just issued, shows that in 1873 there were 4294 applications for patents, and of these 2910 were completed. The third year's duty, 50*l.*, was paid on 737 patents, and the seventh year's duty, 100*l.*, was paid on 232 patents. The most interesting part of the report is the renewed reference to the suggestion made 10 years since to remove the commissioners' offices to Fife House and Gardens, Whitehall, as to have transferred them to South Kensington, or any other country district near London, would have been more inconvenient to inventors, patent agents, and all others using the Government office, than Manchester, or any other place where manufactures are carried on. The report states that the readers in the library being of the class of scientific persons, barristers, mechanical engineers, chemists, inventors, skilled workmen in the various factories, solicitors, and patent agents, it is obvious that the readers should be enabled to read the books and examine the machines and models at the same time and in the same place, and, consequently, that the patent office, public library, and museum should be either under the same roof or in very close proximity, and also that the spot to be selected should be of easy access to the class of persons above referred to. This was written in 1864, yet the circumstances are little altered, except that there is a better chance at present for a site near Charing Cross. The museum has always appeared to be a most useless and unnecessarily expensive appendage to the Patent Office, so that its location at South Kensington is no inconvenience to anyone; but the heavy surplus accumulating each year in the hands of commissioners, notwithstanding the most wasteful expenditure in every possible direction, fully justifies inventors in agitating for the immediate reduction of all patent fees to one-fifth their present amount. The patent system is one which requires thorough investigation, both in the interest of inventors and manufacturers.

MANUAL OF METALLURGY.—The more general introduction of science teaching in schools has necessitated the preparation of an entirely new style of class-book—a treatise giving a correct outline of the subject, in language readily intelligible to boys, and so arranged as to form a framework which can easily be filled up with details. The author of the present volume ("A Manual of Metallurgy," by W. HENRY GREENWOOD, F.C.S., A.R.S.M., Vol. I. London and Glasgow: William Collins, Son, and Company) has endeavoured to present the student with a condensed and succinct account of the theory and practice involved in the varied operations comprised in the metallurgy of those metals which are of general application in the arts and manufactures, and to this end has utilised Dr. Percy's, as well as notes taken at his lectures, whilst, amongst other works, he has perused with advantage the "Handbuch der Metallurgischen," and other more generally known books. Wherever the metallurgy has come from, it is well calculated to meet the requirements of the student. The present volume, containing the first half of the treatise, embraces the introductory portion, in which the various properties of metal, metallurgical terms, fuel, &c., refers to iron and steel, tin, antimony, arsenic, bismuth, and platinum. The metallurgy of iron and steel is very fully treated of, and illustrations are given in elucidation of the descriptions

of the Rachtette furnace, Siemens' puddling furnace and gas producer, Danks' revolving puddling furnace, the Bessemer and Heaton's converters; and in connection with the manufacture of pig-iron, the hot-blast stoves of Cowper, Whitwell, and others are described, showing that the information has been brought down to the latest date. As a class-book Mr. Greenwood's work is certainly the cheapest and most complete yet published, and will prove equally acceptable to both the student preparing for the technical examination of the Science and Art Department and to young men engaged in ironworks. The second volume is to complete the work, so that a really good metallurgical treatise will be obtainable for 5*s.*, which is sufficiently low to ensure a very large circulation.

LLWYN TRIFY LEAD MINING COMPANY.—The prospectus of this company has been issued, and appears in our columns this day, with a capital of 15,000*l.* in shares of 1*l.* each, 8000 of which are taken up by the vendors in lieu of cash for the purchase of the property, and 7000 are to be issued to the public to provide capital for the further development of the mines, erecting machinery, &c. The mines are situated in the richest mining district of Cardiganshire, and being drained by neighbouring mines can be worked without the aid of pumping machinery at all seasons of the year. The mines having been worked by a few private parties for the last three years, and discoveries of ore having been made sufficient to justify the erection of machinery, and extending the operations, there are not the usual risks and uncertainty attending mining operations in untried ground; on the contrary, in a practical point of view there is every prospect of immediate and regular returns of ore being made. The capital of the company may appear small, but it is considered ample; and many of the companies which have gone on the careful and quiet principle have made profits far exceeding those of greater pretensions. The undertaking deserves attention, and it is a really substantial proof of the faith of the vendors in the results of the extended working that they take the whole of their purchase-money in paid-up shares.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

ANGLO-ITALIAN MACCARONI COMPANY (Limited).—Capital 150,000*l.*, in 2*l.* shares. To take over the business of Messrs. Ray and Co., of St. Pancras.

LONSDALE LEAD MINING COMPANY (Limited).—Capital 10,000*l.*, in 1*l.* shares. To acquire mining property in the County of Westmoreland. The subscribers (who take one share each) are—W. Paton, Rock-Ferry; Walter Eddy, Llangollen; J. Nancarrow, 31, James-street, Liverpool; J. Hallows, Liverpool; R. Hardman, Liverpool; and G. Saxelby, Shrewsbury.

BRITISH MINING AND MILLING COMPANY (Limited).—Capital 100,000*l.*, in 1*l.* shares. To carry on mining operations in Nevada. The subscribers (who take one share each) are—W. C. Sargeant, Surbiton; W. R. M. Gassett, 77, Cannon-street; W. Tak, Warwick-street, Pinlücke; E. Homan, Surbiton Hill; T. J. Bewick, 4, Broad Sanctuary; J. B. R. Johnson, Elan Villa, Teddington; and J. G. Fankshaw, Halkin-street, Belgrave-square.

MANTER MINING COMPANY (Limited).—Capital 50,000*l.*, in 5*l.* shares. To carry on mining operations in California. The subscribers (who take one share each) are—H. R. Hyndman, 34, St. George's-road, Regent's Park; G. A. Henty, St. Ann's Villa, Notting Hill; J. C. Hutchinson, Wellington-street; S. G. Martin, St. Michael's Buildings; C. F. Hunter, 6, Portman-street, W.; A. J. Bedford, 12, Russell-terrace, Brixton; and H. H. Hyndman, Devonshire-street, W.

WEST SOMERSET CHEMICAL AND MINING COMPANY (Limited).—Capital 5000*l.*, in 10*l.* shares. For the purchase of the chemical works known as the Wood Works, Kingsbampton, Somerset. The subscribers are—M. Bayliss, Ashfield House, Wolverhampton, 115; W. Bayliss, Wolverhampton, 115; S. Bayliss, Wolverhampton, 50; Thomas Lomas, Minehead, Somerset, 115; S. Marsh, Wolverhampton, 100; W. Bayliss, Torquay, 6; and E. Jones, Amhurst road, Hackney, 115.

FINANCIAL AND INVESTORS' PROTECTION ASSOCIATION (Limited).—Capital 1,000,000*l.*, in 1*l.* shares. The subscribers to this company (who take one share each) are J. E. Symons, Markham-street, Chelsea; J. Paultet, Earl-street, Finsbury; W. H. Treadgold, Westmoreland-road, Walworth; H. Ficknell, Peckham; F. B. Macmahon, Penn-road Villa, Holloway; W. N. Thompson, Neville-road, N.W.; G. A. Brown, 19, Budge-row, E.C.

WHITWORTH AND COMPANY (Limited).—Capital 150,000*l.* in 10*l.* shares. To acquire cotton mills, &c., near Halifax, Yorkshire. The subscribers (who take one share each) are—J. W. Whitworth, Halifax; J. Wells, Luddenden; W. Haddon, Halifax; J. Lightowler, Halifax; J. S. Lees, Halifax; R. Haddon, Halifax; F. Walker, Halifax.

OSWESTRY COAL AND BRICK COMPANY (Limited).—Capital 30,000*l.*, in 10*l.* shares. For the acquisition of a colliery and brickworks at Oswestry. The subscribers (who are all of Manchester, and take one share each) are—Thomas S. Jenkins, 11, York-street; H. Atkinson, Leek; R. B. Brielly, Cannon-street; J. Allan, Market-street; A. Rowbotham, Cannon-street; J. Littlewood, York-street.

SOUTH-EASTERN BONDED WAREHOUSES AND WHARF COMPANY (Limited).—Capital 80,000*l.*, in 10*l.* shares. To acquire bonded warehouses in the parish of St. Saviour, Southwark. The subscribers (who take one share each) are—Thomas Linsell, 1, Gresham Buildings; G. Gowland, Clapham; Clarence Harcourt, 8, Moorgate-street; R. H. Moore, Regent's Park-road; W. Brooks, 11, Old Jewry; R. J. Macartney, Moorgate-street; J. Lifford, Gresham Buildings.

CATT BROTHERS (Limited).—Capital 30,000*l.*, in 5*l.* shares. To acquire the goodwill of Messrs. Catt Brothers, of Ipswich, Woodbridge, and Colchester, coach builders.

TUNBRIDGE IRON AND BOILER WORKS COMPANY (Limited).—Capital 50,000*l.*, in 10*l.* shares. To purchase the Tunbridge Ironworks, at Huddersfield. The subscribers are—H. Bray, 7, Lincoln-street, Nottingham; J. S. Gilpin, Baker-street, Nottingham; G. R. Cresswell, Nottingham; L. F. Allen, Leeds; D. B. Fletcher, Bradford; W. J. Boer, Lloyd-street, Leeds; 1; J. C. Malesher, Leeds, 1.

GENERAL SHARE TRUST COMPANY (Limited).—Capital 250,000*l.*, in 2*l.* shares. "A" shares of 10*l.* and 2000 "B" shares of 1*l.* For the investment of funds in shares and debentures, and the establishment of undertakings both at home and abroad. The subscribers (who take one share each) are—T. Jervis, 3, Knight-street, Chesham; W. Goodall, Eagle-terrace, Starch Green; C. G. Phillips, High-street; A. R. Thomson, 22, Westbourne-terrace; C. Barlow, 97, Piccadilly; T. D. Whitehall, 18, Queen Victoria-street; and C. Castello, 40, Howlesdown-lane.

Meetings of Public Companies.

PARYS MOUNTAIN MINES COMPANY.

The eighth general meeting of shareholders was held at the offices, St. Helen's-place, Bishopsgate-street, yesterday (Friday), Mr. J. Y. WATSON in the chair.

Mr. F. R. WILSON (the secretary) read the notice convening the meeting.

The report of the directors (referred to last week) stated that of the 5000 preference shares authorised to be issued on March 17 not one was applied for or allotted; and as it is absolutely necessary that the company should have some cash in hand as working capital, they advise the shareholders to pass a resolution suspending the issue of the preference shares until sanctioned by a further special resolution of the company, and authorising the allotment of the unpaid shares created by a resolution passed on Jan. 31, and confirmed on Feb. 17, 1873. When the preference shares were created in March, and which it is now considered advisable not to issue, a resolution was passed that the unallotted portion of the 12,000 additional shares created in January, 1873, should not be issued "unless and until the same be directed by a further special resolution of the company." It is therefore, proposed to pass such a resolution at this meeting.

The reports of the agents show that only a better price for copper is required to make the mines pay well from the ores raised from them. The directors are further in treaty with some capitalists interested in the new process for returning poor copper ores, to let them the mountain of halvas, or poor ores, on tribute; and if the arrangement is carried out it will give a good monthly profit to the company without any trouble or expense whatever. Of these halvas—chiefly accumulated at the time when the mine was yielding enormous profits from the richest portions of the ore—there is almost an unlimited supply, but at present they are not yielding anything to the company beyond aiding the precipitate pits by the water which flows from them after heavy rains.

The CHAIRMAN said that at the meeting in February the ores in reserve were estimated at 6000*l.*; there had since been sold 3000*l.* worth, and the reserves had been not reduced; 140 tons of copper had been sold since the accounts were made up, and 300 tons of native ochre had been sold that morning, at 10*s.* per ton. With regard to the new process, a number of gentlemen interested therein had made a proposition to the company to take the poor ores at a tribute of 1*l.* in 1*l.*, but the directors thought that was not quite enough, and asked 15*s.* in 1*l.*. The matter was still under treaty, and if carried out no doubt it would prove of considerable advantage to the company. At the same time, the directors must have money to go on with, as they were accustomed to pay money for everything, whilst the returns of the company were sometimes not realised in cash for three months, and although there were assets over liabilities to the extent of 3000*l.* it was not in cash. The directors proposed to rescind the resolution, passed some time since, issuing the preference shares, and to substitute the resolutions contained in the notice calling the meeting; and he believed there would be no difficulty in getting rid of the shares mentioned therein. He moved that the report and accounts be received and adopted. Mr. HEATH seconded the resolution, which was put to the meeting and carried without any discussion.

The CHAIRMAN then moved the following resolution:—"That the directors be authorised and empowered to receive applications for and to allot all or any of the 7077 (3*l.*) shares, which, in accordance with the special resolution passed at the extraordinary general meeting held on March 2, 1874, and confirmed on March 17, 1874, still remain unissued."

The Rev. A. COOPER seconded the resolution.

The CHAIRMAN, in answer to Mr. Heath, said the directors had never had any application for any of the preference shares.

Mr. BEABY, a director, said that all the directors were ready to take their proper

proportion of those shares if the rest of the shareholders would also come forward, but it was no use their taking up their proportion unless the shareholders did the same.—The resolution was then put and carried.

The CHAIRMAN then moved the following resolution:—"That the 5000 A shares of £1 each fully paid, bearing a preferential dividend of 15s. per annum, authorised by the special resolution of this company passed on March 2, 1874, and confirmed March 17, 1874, but which still remain unallotted, be not issued unless and until the same shall be directed by a further special resolution of the company."

Mr. HEATH seconded the resolution. The CHAIRMAN, in reply to a remark by the Rev. Mr. Cooper, said that if they possessed the authority six weeks ago, the directors could have issued almost every one of the shares. If the new process answered, the company could raise thousands of tons of ore, which it would not answer to raise at the present time. He believed the gentlemen to whom he had referred proposed to lay out 5000*l.* or 10,000*l.* The Rev. Mr. Cooper asked whether this company had expended any money in trying the new process.—Mr. BRADY said that it was the duty of the directors to spend any spare money in carrying out the operations at the mine, and which were essential to make the mine a great success—to arrive at the great open-cut under the white rock. A great deal had been done to the end, but not during the past six months, in consequence of the price of copper having been so low; although there was abundance of copper in the mine, it was scarcely worth getting it out in large quantities.

In answer to Mr. HEATH, Mr. WILSON said that all attempts to get the royalty reduced had been unsuccessful; but at the same time the company had not been pressed for the money.

After some further unimportant discussion, the resolution was put and carried. The meeting then broke up.

WHEEL KITTY (ST. AGNES) MINING COMPANY.

At a quarterly general meeting of adventurers, held at the account-house, on the mine, on Wednesday (Mr. Wm. TEAGUE in the chair), Mr. HICKEY (the secretary) read the notice convening the meeting.

The accounts, charging cost to June 13, showed a profit on the quarter of 536*l.* 12*s.* 8*d.*, and a balance in favour of the mine of 637*l.* 13*s.* 10*d.* A dividend of 2*s.* 6*d.* per share (536*l.* 17*s.* 6*d.*) was declared.

The following agents' report was considered very satisfactory:—
Sept. 9.—Fryer's Lode: The new shaft is being sunk about 5 fms. under the 142. We do not expect to see the lode before the 154 is reached. Fair progress is being made with sinking. In the 142, driving west of new shaft, the lode is yielding saving work for tin. In the 142 east we are cross-cutting the lode, the main part of which we hope to reach shortly. In the 142, on the counter, driving north, the lode is worth for tin 7*l.* per fathom. In the 130, driving west of shaft, the lode is worth for tin 13*l.* per fathom. In the 130, driving east of shaft, the lode at present is disordered by means of nearing a small cross-course. In the 118, driving west of shaft, the lode is worth for tin 10*l.* per fathom. In the 108, driving west of shaft, the lode is worth for tin 9*l.* per fathom. In the 20, driving east of shaft, the lode is producing saving work for tin. In the eastern adit, driving west of boundary, the lode is without alteration since our last, being still of a most promising character. On the whole, our prospects are not quite so good as at the last meeting, but we anticipate an early improvement in the bottom of the mine. The continuous depressed state of the tin market is sadly against us, but we hope for better days even in the tin market, when we shall resume our former position by paying increased dividends.—Wm. TEAGUE, S. DAVEY, JOHN WILLIAMS.

BAGWORTH COLLIERY COMPANY.

The third ordinary general meeting of the shareholders was held yesterday (Friday), at the London Tavern.

Mr. WALTER ARMSTRONG in the chair.

The notice calling the meeting was read by Mr. T. L. Fox (the secretary).

The directors' report, which was taken as read, was as follows:—

In convening the half-yearly ordinary meeting your directors append the balance sheet and statement of accounts for the six months ending June 30, 1874. It will be seen that after payment of the interim dividend made on May 15, there still remains from the profit and loss account for the half-year a balance of 1113*l.* 10*s.* 5*d.* This, considering the state of the trade, and that for nearly two months the colliery was wholly unproductive owing to the strike, is fairly satisfactory. The directors, after careful consideration, and in order to protect the interests of the company against the low frequent combinations of the men, having decided that the company should become a member of the Leicestershire and South Derbyshire Coalowners' Protection Association, arrangements were made, and the company has now, by virtue of the act of the directors, joined the said association. In order to completely legalise this, it is proposed to confirm it by special resolution, and for that purpose the meeting will be made special after the completion of the ordinary business. As showing the advantages which have already resulted from the company's joining the association, it may be mentioned that, as compensation for the loss the company sustained during the strike, which lasted nearly two months, owing to the men refusing any reduction of wages, we are entitled to, and will be paid by the association, a sum of 600*l.* Extracts from the report of Mr. Lewis, the engineer, are appended, which show that the company's property and works are now in a more efficient state than they have ever been. Your directors recommend that out of the balance of 1507*l.* 19*s.* a further dividend at the rate of 5 per cent. be declared for the half-year, which will absorb 837*l.* 1*s.* 10*d.*, leaving 670*l.* 17*s.* 2*d.* to be carried forward.

Extract from the report of Mr. George Lewis, the company's engineer, dated August 15, 1874:—The colliery generally was never in so good a condition as at present. The pumping and winding machinery have been maintained in an efficient state, the former at considerable cost, and also the winding shafts have been improved. The colliery is now capable of producing weekly a larger output than ever before was the case, thus showing that your renewals and improvements have materially increased the value of your property. Such being the case, I cannot think a depreciation fund a fair charge, neither do I think there is any necessity for it, but the reverse, as the colliery and works are improved."

The CHAIRMAN said he had very little indeed to add to the information contained in the report. The shareholders were, no doubt, disappointed at the smallness of the dividend compared with what it had been before, but upon an examination of the accounts that was easily accounted for. There had been a great diminution in the coal sold during the past six months, the sales having amounted to 13,804*l.*, as against 20,337*l.* in the previous six months, and that had partly arisen from a diminished quantity, and partly from the largely diminished price. The best coal was diminished in price to the extent of about 8*s.* per ton, and that on 60,000 tons a year would give a diminution of 15,000*l.* There was a strike, by which about two months were lost, although there were heavy expenses going on during that time. Then, again, there had been a reduction in the price of slack, which formerly sold at 8*s.* and 9*s.* a ton at the pit's mouth, whilst it was difficult now to sell it at 4*s.* and 5*s.* 6*d.* per ton, and of course this had interfered materially with the profits of the colliery. Then, again, the new law with respect to collieries, which came into operation on August 1 last year, had proved more disastrous to colliery owners than was at first anticipated. Before the law came into operation the men gave 24 cwt. to the ton to cover waste, but now they were only obliged to give 20 cwt. to the ton, whilst in selling the company had to give 21 cwt. to the ton, so that the company lost 1 cwt. per ton to begin with, and the waste besides. Since the last meeting Mr. Miller had retired from the board, and the directors had the good fortune to find that Lord William Phipps was willing to become a director, and his lordship was accordingly elected to a seat on the board. The working of the colliery at present was very satisfactory; he had himself visited the colliery a fortnight ago with Lord William Phipps, and everything was going on very nicely, and he could safely say that the company was working at a profit. He moved the adoption of the report and accounts.—Lord W. PHIPPS seconded the resolution.

Mr. WILSON said that, like all trading companies, the dividends of this company must go up and down, but he thought that, on the whole, the shareholders had every reason to be satisfied with the dividend which they had received.

Mr. W. GLEADON (director) said that since the strike there had been a reduction of 8 per cent. in the price of coal, and the men threatened to strike again if any further reduction were attempted. There was no doubt that the new law had turned out very disastrous for colliery owners, and next week the Leicestershire and South Derbyshire Coalowners' Protection Association, of which this company was a member, were going to discuss the whole subject, and see what was best to be done.

The CHAIRMAN, in answer to Mr. Wilson, who remarked that the wagon hire was somewhat high, said that at present all the wagons required by the company were hired, but a good deal of that was got back again by being charged to the customers.

Mr. PAGAN thought that depreciation ought to be charged upon the property, as was done last year, and he moved that the report be altered by writing off 240*l.* to depreciation and carrying forward 297*l.* 1*s.* 10*d.*, instead of the 537*l.* 1*s.* 10*d.* mentioned in the report.

The CHAIRMAN said the directors had no objection to the adoption of such a course, and after a short discussion the report was adopted with the alteration suggested by Mr. Pagan.

The meeting was then made special, and the following resolution was passed:—"This company having, by resolution of the board, dated Aug. 17, 1874, become a member of the Leicestershire and South Derbyshire Coalowners' Protection Association, resolved that the act of the directors in making the company a member of the said association be, and hereby is, approved and adopted by this company."

A vote of thanks to the Chairman and directors closed the proceedings.

LADY CONSTANCE LEAD MINING COMPANY.

An ordinary general meeting was held on Tuesday, at Manchester Mr. PICKLES in the chair.

The CHAIRMAN said they were met in accordance with a minute passed at the ordinary general meeting held on March 31, at which it was resolved—"That a printed balance-sheet and report be sent to each shareholder at least ten days prior to such meeting." Owing to the delay in auditing the accounts of the company, and other circumstances over which the directors had no control, the meeting had been unavoidably postponed. It was, perhaps, owing also to the desponding tone of the report issued by the directors that they had not a larger attendance on the present occasion, and had they postponed the meeting for a few weeks longer, he thought they would have had more shareholders present, as a great change for the better had taken place since that report was issued. He was glad to say that the ground in the new shaft had commenced about a week ago to yield large quantities of white ore, and that only the previous day two directors had been over the mine, and brought back with them the samples of ore now lying on the table, which they had themselves seen obtained direct from the shaft and washed. This deputation (he said) stated that the ground taken from this shaft would yield, on the average, 20 per cent. of ore, and that the reports Capt. Waseley had sent with respect to the mine were good and substantial statements. The directors had worked very hard since their appointment, and were doing their best to make the mine a good dividend-paying one, and therefore he was heartily glad to have, unexpectedly, such good

news for them, and he hoped by next meeting that they (the directors) would have a still more cheering report to give. The secretary then read reports and correspondence from Captain Waseley and the Rev. David Jones, confirming what the Chairman had said with regard to the promising appearance of the mine, and stated that it was entirely owing to the kindness of the Rev. Mr. Jones, who had already advanced 1000*l.*, that they were enabled to continue working the mine.

Two directors having resigned, it was resolved that Mr. John Andrew, of Oldham, become a director of this company.

It was also resolved that Mr. Benjamin Grime, of Oldham, be auditor until Christmas, 1875, after which, there being no further business, the meeting dissolved.

[For remainder of Meetings see to-day's Supplement.]

Original Correspondence.

THE NASCENT COPPER PROCESS.

SIR,—I have no objection to respond to the appeal, albeit anonymous, contained in the letter of "Mine Adventurer" in the Supplement to last week's Journal. As reference is therein made to former processes of obtaining silver, and looking moreover to Mr. John Longmaid's letter in the Journal of Aug. 8, in which that gentleman avers his ignorance of any improvement or discovery of any other branch process that was not carried out 20 years ago at St. Helen's, I think it may be of service if I point out the salient features which render the Nascent Copper Process novel as well as efficient and remunerative.

In the first place, the very title of the process indicates the most distinctive amongst its peculiarities—the employment of nascent copper as a precipitant for silver. All chemists are familiar with the fact that every element is more prone to enter into a new combination at the moment of its dissolution from a former one than it is under any other molecular condition. An element newly dissociated is in what is termed the nascent state, and its chemical affinities are then most pronounced and active. Therefore, by using copper in a nascent condition instead of ordinary cement or metallic copper, a great increase of efficiency in precipitations from solutions of silver-salts is attained. Nor is this all; not only can the Nascent Copper Process be profitably applied to silver ore of too low a grade to be treated by any other method, but a further advantage is attained—the utilisation of poor copper ores as the source of the nascent copper required. Usually where the main lodes carry copper the cross-courses carry silver, and by simply mixing the halvens of each together the smallest percentage of either metal may be extracted.

Again, the use of hot brine as a lixiviating agent has in all former processes been restricted to the treatment of silver ores, and has never, hitherto, been directly applied to the extraction of copper. In the Nascent Copper Process, on the contrary, hot brine plays a very important part as a solvent of copper, as well as of silver, owing to the operation of a chemical principle, which, having as yet remained unobserved, I do not feel called upon to disclose. I may, however, add that by the mode in which this principle is brought into play by the Nascent Copper Process the action of the chloridising furnace is rendered more complete than under any other method of treatment.

A third improvement consists in the precipitating as well as in the lixiviating tanks. The only prior example of this is to be found in Claudet's process, but there the jet of steam is applied after the precipitation of the silver, and solely to assist the subsequent copper precipitation—a case, therefore, by no means parallel, and in no wise affecting the originality of the Nascent Copper Process.

The above will constitute a sufficient answer to the remarks of Mr. Longmaid and "A Mine Adventurer," and it will not be necessary for me here to enter upon a minute exposition of the other important features which distinguish the Nascent Copper Process from preceding inventions. These I must be permitted to reserve, but I may state that they involve a number of practical points, the presence or absence of which affects the profits of the process rather than its principle. Hence I have little fear of any attempt at infringement, or of the "unnecessary and undesirable litigation" suggested as possible by "A Mine Adventurer," since in the chemical treatment of poor substances no margin exists to allow for practical blunders; and those who attempt to use the Nascent Copper Process without fully mastering its minor as well as its major principles will lose both time and money. On the other hand, those who employ the process under the direction of the patentees will find the royalty (in amount the reverse of excessive) altogether insignificant compared with the profits resulting from the complete carrying out of the plan.

S. Old Jewry, E.C.

STEPHEN H. EMMENS.

SOUTH PRINCE PATRICK (NEAR HOLYWELL).

SIR,—A company was formed to work this mine about 12 months since, whose success to this time is worthy of particular notice. The proprietary being chiefly in the North of England, nothing beyond the usual reports finds its way to your columns. I, therefore, send you the following few particulars ascertained by personal inspection. The company consists of 8000 shares of 1*l.* each fully paid, and its success during the short period of its existence is shown by the returns of lead ore made, and being made. The sale this week of 40 tons of ore, worth from 13*l.* 10*s.* to 14*l.* per ton, the produce of one month (the cost of gaining which, everything included, is less than 150*l.*), is to be continued, and is guaranteed by the reserves of lead ore already laid open. Estimated upon this return the minimum profit would be 4800*l.* per annum. The first dividend of 2*s.* per share will be declared at the meeting to be held a month or five weeks hence. Few mines having done so well as this in so short a time it will be interesting to some of your readers to know that successful lead mining can still be carried on in North Wales.

10, Coleman-street, E.C., Sept. 11.

A. W. THOMAS.

ANGLO-AUSTRIAN BANK.

SIR,—Not being able to ascertain from the bank officials the reason why no dividend has been declared by the directors of this bank in July last, or whether they have succeeded in disposing of the remaining 29,779 shares at par—12*s.* per share—as set forth in their balance-sheet of Dec. 31, 1873, I crave your assistance in obtaining a reply to these queries, which will much oblige.

London, Sept. 11.

AN ANXIOUS ENQUIRER.

[For remainder of Original Correspondence see this day's Supplement.]

MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

CHAPL HOUSE COLLIERY.—The manager writes that he is "glad to say we are very busy, and prices are remaining very firm." As the winter nears it is expected that prices will rise, and so the profits will be much increased. As soon as the 50 new wagons are delivered the manager thinks he can increase the present output by 1000 tons per month. In order to do this the more speedily he has split the order for the wagons, and will by that means ensure their delivery much earlier than would otherwise be the case. The demand continues far in excess of the output, and last month 1700 tons of coal were purchased in excess of the output to supply the company's customers. This yields an additional profit, and the fact that the coal is sold direct to the consumer, and so saving the profits of intermediate merchants, cannot be thought too much of.

TAN-YR-ALLT MINE (Cardiganshire).—Some weeks past we published a notice of this mine, since we are informed a valuable improvement has taken place, and a winze of ore is now to be seen in the bottom, which is 10 in. of solid silver-lead, and the remainder of the lode is ore-bearing throughout its entire width, about 4 ft. Should this prove good in length as well, this new mine may prove one of the prizes of mining, of which there have already been several in this well-known lead-bearing country. We hope one of the results may be to direct public attention to Welsh mining, which has lately been sadly neglected. It is satisfactory, as in this case, to find private enterprise and perseverance under very disheartening circumstances richly rewarded.

HINGTON DOWN.—An improvement of some importance has taken place in this mine, the lode in the 110 being worth 20*l.* per fathom, and showing indications of a far greater improvement. The 110 is the furthestmost and westward. The next sampling is 500 tons of copper ore, and with the firm standard a good sale is anticipated.

BEDFORD UNITED is still looking well, but owing to a slight accident to the machinery the sampling last month is reduced in quantity. All is in good working order again, and with a better price for copper the mine will continue to make profits.

SOUTH WARD.—The North Hoole lode, recently intersected by a cross-cut at the 60, is showing every appearance of a good course of lead ore as the south end is advanced. The shaft will ere long be down to the 90, when it is anticipated the two lodes will meet, and a permanent profitable mine be established.

SOUTH FRANCES.—A correspondent writes that this mine appears to be under a cloud for the time, although it is said that every exertion is being

made to cut the West Basset lode. The monthly costs and merchants' bills are still very heavy, and apparently no steps are being taken to reduce them, notwithstanding the low price of tin.

SOUTH WHEAL CROFTY.—We are glad to hear that the lode in the shaft, which at the last meeting was reported worth 20*l.* per fathom, continues to improve in depth.

CATHEDRAL MINE.—The lode at the shaft is worth 40*l.* sterling per fathom. The first sale of copper was made last week, and realised an excellent price—54 tons sold for 349*l.*; this is looked upon as an excellent commencement.

FOREIGN MINES.

DON PEDRO.—Letter from mine captain, dated Aug. 10: Produce for July, 6605 o*z.* The ore continues to be fair in quality, and has again been taken from the Canoa and Nos. 6 and 8 shoots. Some very fair boxwork has been taken from No. 8 shoot, just below the 25. Sinking has been hindered during the past week, in consequence of those sand boils choking the pumps, but now have the 10 in. lift near the bottom of the shaft, so that should the sand again burst in such quantities as to choke the 5 in. pumps we can put the 10 in. to work in an hour. The water being drawn from the mine still amounts to 18-24 cubic feet a minute; this shows that for the last two or three months the water has not increased.—Stops: Stopping throughout the mine has been continued without change.

EBERHARDT AND AURORA.—Telegram from Captain Drake:—"1010 tons crushed during August, producing 10,572*l.*; average assay, 86*o* per ton. Mine looking well."

RICHMOND CONSOLIDATED.—Telegram:—"34,000; two-and-a-quarter furnaces; still short handed; mine looking well."

MINERAL HILL.—Extract from a letter received by the official liquidator from Mr. Oakes, the superintendent at the mines, dated Aug. 17:—"The prospecting progresses without any change to notice. The mines continue to be worked, and turning out a good quantity of ore. The raisings this week amount to 80 tons, of an average grade of 86*o* per ton, raised at a cost of \$1000-75, including prospecting, &c."

SAN PEDRO (Chili).—Capt. Kitto, July 15: Since my last we have been engaged at the 110. We have cleared out the level leading to the Manto Verde, and have discovered a great deal of native copper in the brute stone, which leads me to believe that the Manto Verde is not yet cut. I shall put two men to drive here as soon as we have finished securing the level, &c. Cuba Mine is being worked by two men driving a cross-cut from east, through a splendid channel of ground, and is producing good stones of ore.

BIRDSEYE CREEK.—Telegram from superintendent, Mr. G. S. Powers:—"We have cleaned up after a run of 30 days. The gross returns are \$5000. The tunnel expenses are \$1800. The profit is \$3200."

NEW PACIFIC.—J. D. Pringle, Aug. 18: The general appearance of the mine is fully as good as when I last wrote you. I have just a body of very base ore in the 300 ft. level west. I feel very much encouraged at finding a very base ore at this point. This level has been driven west a distance of 225 ft. with scarcely a sign of ledge or metal of any kind until the present hole was struck, which I have no doubt will soon change to pay-ore. The points at 800 ft. west of the shaft are producing a considerable amount of low-grade ore. I have found no ore as yet in the level east of the cross-cut, but I am taking out some good ore below the 400.

COLORADO TERRIBLE LODGE.—Agent's advice to hand are dated Aug. 22. He encloses railway receipt notes for the 44th and 45th shipments to Liverpool, of 10 tons each, and advises that on Aug. 25, and the 4th week after. The mine was looking well, and concentration processes satisfactory. Ores raised in June, 328 tons; net profit, \$4857.75. With regard to the shipments to Liverpool, three only have as yet arrived—the 41st, 42nd, and 43rd. Our Liverpool agents have this morning remitted 900*l.* on account of the 41st shipment, which realised 913*l.* 13*s.* 9*d.*; the others are for sale at an early date.

UTAH (Silver-lead).—J. Longmaid, Sept. 17: I wrote you on the 11th inst. Since that date nothing of importance has occurred, and I regret to be obliged to report the same discouraging accounts of the mine. The stops are no shade better, but the ground is being worked out very much faster than we can open fresh ground, because nearly everywhere we drive we find only poor stuff of 5 to 10 per cent. The carbonate workings are looking better, and are now producing ore that will yield a fair profit. The dressing works are working daily, and are hindrance.—Sale of Ore: Since my last I have spent four days in Salt Lake to see if we could sell any ore, and after a great deal of trouble succeeded in selling 120 tons, at a reduction of 82 per cent. We have also nearly settled with another buyer for 200 tons, and he is to give a decided answer to-morrow. He has us we might consider it sold, but, of course, until the contract is actually closed, cannot be certain for it. In consequence of the recent fall in the price of lead, and the fact that the Government is selling 9000 tons of lead, low-quality ore is almost unsaleable, and our ore being so very low in silver it cannot stand the expense of transmission to England.

NORTH AMERICA (Gold).—Aug. 14: The south sub-drifts seem to be draining rapidly, and give promise of being early in a condition to dry. A one breast extraction has been going on steadily for the past four weeks, and the superior quality of the gravel therefrom has, when washed with a larger quantity taken from old ground, made an average large enough to leave some profit. The work can be continued until the whole force are got into the new ground. The prospects of the ground are decidedly good. The main tunnel has already advanced 40 ft. ahead of last rise; the rock is a soft blue clay-slate. We are putting in a switch, to open an intermediate drift to the south, which will have the escape of the water. A similar opening will be made on the north side. We proposed to carry the tunnel about 150 or 200 feet further before starting the sub-drifts. Very little gravel was taken from new ground, and owing to the increasing supply of water the washing was hurried, and it is safe to calculate that as much as 17 per cent. more gold went through into the tailings. The main tunnel has advanced 48 ft. beyond the last rise. In the course of 20 ft. more about shall again go up to the surface of the rock and prospect the gravel. Air connections at some points will have to be attended to this week, and all of the drifts will be pushed ahead as fast as possible. In two months time we may reasonably hope to have three breasts of 80 ft. width each opening on the eastern side. As fresh openings are made ahead the water at some points shows signs of rising, especially on the south side of tunnel. The heavy snowfall of last winter arranged some of the framework supporting the track over the dump yard; upon this, as well as all other outside work, are in order now. With the drying of the water in the ditches washing operations will come to an end for the season.

CAPE COPPER.—The Ookiep and Spectakel Mines reports are received. They show no material alteration from the last. Returns for July: Ookiep 765 tons of 30 per cent.; Spectakel, 57 tons of 31 per cent. Bill of lading is received for 600 tons of ore per Tacona.

WEST CANADA.—Aug. 18: Huron Copper Bay: The slope in the bottom of the 35, west of Palmer's shaft, will yield 25 tons of copper ore per ton. In the bottom of the 50, east of Bray's shaft, we have a slope also yielding 25 tons of ore per fathom.

MENZENBERG.—R. K. Roskilly, Sept. 9: We are getting on with the sinking of Dickin's engine-shaft, and in the last 3 ft. of yellow we have with some very conical branches of spar intermixed with spots of yellow ore, which are very promising. The shaft is now 3 ft. under the level of the lode, and their dropping in that direction is a good indication. This shaft sunk 43 fms. 2 ft. below surface, and we are pushing on the same with all possible speed. We put on another pump yesterday, so as to lengthen the drawing shaft, which is in good order; and the shaftmen are again busily engaged in sinking the shaft. All our work is going on most satisfactorily.

PESTARENA UNITED.—T. Roberts, Sept. 4: District Val Topp. The end of No. 4 level continues much the same as when last reported; the difference the rock is of a lighter colour, and the footwall more regular; the lode is now to value. This end advanced in August 10-90 metres, and is six men for September at 40*l.* per metre. No. 5 end, south of No. 4, was driven last month 5-25 metres; set for the present month to six men, at 40*l.* per metre. The branch or decomposed part is now 4 in. wide; there is no change in the rock abounding it.—Canal Mine: The Ribasso Sasso Nero was driven in August 2 metres, set for September to two men, at 60*l.* per metre. At the junction of counter branch to footwall of lode we passed a small pocket of ore 9 in. wide, 6 dwts. 22 grs. per ton; the lode in the end at present is very small, yielding 6 dwts. 22 grs. per ton; the lode in the end at present is very small, yielding 6 dwts. 22 grs. per ton; the lode in the end at present is very small, yielding 6 dwts. 22 grs. per ton.

—District of Pestarena: The walling up of the second section of the most difficult part of the shaft has been finished; total secured by walling 25 metres remaining yet to reach the surface 15 metres, on which fair work is being done. Opening out for walling and raising. The cutting down of rise between the 40 and 45 levels is progressing favourably. All work connected with the new level and works and hoisting machinery is being pushed on with vigour.

PONTGIBAUD.—Wm. H. Rickard, Sept. 1: Roure: The 80 metre level north is still in hard wet ground; the lode is 1 ft. wide, of poor quality, and the same level south is in soft disordered ground. The 60 north is a little less, and the lode is regular, composed of quartz and barytes, without any lead ore at present. The 40 metre level south continues to open good ground, worth 3*l.* 10*s.* per metre. The same level north is poor. The adit north is in poor ground, and the 20 metre level, south of the mill shaft, yields 3*l.* 10*s.* per metre. The winze ahead of this end opens stopping ground. The adit north of Leontine is in poor ground.—La Grange: The 130 metre level north is in a large strong lode, composed of jointy quartz, spotted with murex and lead ore. The 80 metre level north, on the western part of the lode, yields 3*l.* 10*s.* per metre per current metre. The 140 metre level, south of Basset's shaft, is unproductive. The 150 metre level, in the same direction, yields 3*l.* 10*s.* per metre. The 160 metre level, as last reported, yielding 3*l.* 10*s.* per metre; the lode is in its full width behind this end, which is at this point 6 metres, and yields 3*l.* 10*s.* per metre. The 80 south is poor. The lode in the 40, where being cut by the eastern part, yields 1 ton per metre.—Pranal: The sinking of St. George's shaft below the 70 metre level has been resumed, and in a few days will be completed to the 90 metre level, and a good fork. The 70 north is hard, and the 70 south is poor. The winze below this level, opposite St. George's shaft, yields 3*l.* 10*s.* per current metre. The 70 south yields 3*l.* 10*s.* per metre. The 70 north is in now 1 ft. wide, giving 3*l.* 10*s.* per metre. The 30 north of the western part of the lode without meeting with anything of value. Our surface works are now in the mines have gone on without interruption. The samplings have been taken to 275 tons. At St. Amant in sinking the winze in the 25 south some, showing patches of ore in carbonate of lime and quartz. The same level south continues

TECOMA.—It is said another carload was shipped to-day, viz. 25,000 lbs. (say 22 tons). The superintendent at the furnace is very well pleased with the turn out of the ore. A larger staff of men is now being procured.

relief valves obviates the splitting which takes place in engines having metallic piston valves alone in the air cylinder, also allows of engines being run at a very high speed, which can be varied to suit the work required to be done. There will also be a small cupola for melting the iron ready for the converter; the shell of this cupola is about 18 in. in diameter, lined with fire-brick or ganister stone. The drawing shows the discharging hole at the side; it may sometimes be placed, and with equal advantage, at the bottom, a door with hinges on movable plate being released, and the slag, &c., allowed to drop. The spigot iron is melted in a smaller cupola, the general design being like the drawing referred to. At the London meeting Mr. J. A. Jones, in describing his puddling apparatus, drew attention to a cupola invented by Mr. Thomas, and gave it as his opinion that this cupola was well adapted for melting the iron previous to putting it into the puddling furnace. He had seen this cupola at work several times, and is of opinion that it could be very profitably employed in melting the iron for the converter. There were likewise drawings of a pair of blowing engines for supplying the converter with blast, consisting of a horizontal frame, counter lift, cupola hoist, and hydraulic pumping engines for supplying the blast and water. The paper is not written in a style which permits of a useful abstract being made, and a general discussion upon it. He showed no plan of the general arrangement for disposing of the machinery used in the Bessemer process, nor yet of the building, as this depends so much on the work to be done and upon local circumstances.

BY ALEX. L. HOLLEY, NEW YORK.

Mr. E. WILLIAMS, Middlesbrough, would like to know from Mr. Bly whether it had ever occurred to the steel rail makers in America to roll the rails in the form of a tire, and so save the cross. It seemed to him that it was possible, and that it would not be difficult to get such exactness in the weight of the mould as to bring a circle almost exactly to the size required, and that the straightening out of the rail afterward, would be a very simple operation; and he had thought, and still thought, that in America that it was a possible economy of a very important kind. He did

Mr. WHITWELL would be glad if Mr. Holley would tell them to what he attributed the increased output in America compared with that of England.

THE MANUFACTURE OF BESSEMER STEEL.

This paper, which was accompanied by several drawings, gave a description of some of the most important appliances used in the manufacture of Bessemer steel. In the opening address of the President at London he told the members that the coal panic, which disturbed the whole trade of the country, would have been avoided if 5 per cent. more coal had been obtained, or 5 per cent. less required. Mr. Walker believes this observation is founded on sound commercial principles. Apply it to the manufacturing of puddled iron, and then imagine what would have been the condition of the iron trade had it not been for the invention of Mr. Bessemer. He would confine himself to a description, pure and simple, of the machines lately made by his firm for some of the most eminent producers of Bessemer steel. The paper described a pair of pressure horizontal engines, suitable for blowing the cupola steam cylinder, 12 in. diameter, 30 in. stroke, and ditto, 36 in. diameter and 30 in. stroke. The air cylinders are fitted with piston valves, and are further provided with leather relief valves, to prevent either vacuum or undue pressure; also to absorb the air contained in the clearance between piston body and cylinder cover. This combination of piston and

[To be continued in next week's Mining Journal.]

The yearly salary of the inspectors varies from 800 thalers (120*fl.*) to 1500 thalers (225*fl.*), and averages about 1150 thalers (172*fl.* 10*sch.*); besides, these officers receive fees for examining boilers, payment of travelling and office expenses, and allowance for horse hire. The yearly pay of the mining superintendent ("Berginspektor") varies from 1200 thalers (180*fl.*) to 2000 thalers (300*fl.*), with house free and other expenses paid. The Government owns coal and metal mines. It administers them through the above-mentioned mining officials (mining board, directors and mining superintendents), on account of its own treasury. The Crown of Prussia does not own any property of this kind. The Government mines are not, as a principle, let on lease, and when in isolated cases certain bits of the Government seams or veins have been let to other parties, they are only most insignificant lots, which, on account of their unsuitable position, cannot conveniently and properly be worked on Government account. The rent is then based on the measuring unit of the gross produce, a yearly minimum of production being fixed for that purpose. Private mines in Prussia are subject to a special tax on the sale of the raw produce. This amounts to 2 per cent. of the gross receipts.

ROCK DRILLS.—A machine is described by **MR. CAMILLE FERROUX**, of Goeuchenen, in which the front portion, with the tool carrier and tool, is fixed to a hollow piston rod from a cylinder forming the rear portion. Air or other fluid under pressure is admitted into the back of the rear cylinder and tends to constantly press forward the hollow piston rod and front portion of the machine, and at the same time passes through a cylinder free and gives to its piston a reciprocating motion, thus giving a jumping motion to the tool, shaft at the side worked by a small engine gives an intermittent rotary motion to the tool, and also works the valves of the front cylinder. Arrangements for regulating the advance of the tool and for withdrawing it are also described.

HOLLOWAY'S OINTMENT.—Bad legs, wounds, ulcers, and all descriptions of sores, are immediately cured by the proper and diligent use of these inestimable preparations. To attempt to cure bad legs by plastering the edges of the wound together is a folly, for, should the skin unite, a baggy diseased condition remains undisturbed, and the cure is delayed for many a day. The only remedy, and a perfect treatment is to reduce the inflammation and about the wound, to soothe the neighbouring nerves, to cool the heated blood as it courses along its vessels, and to render the thin, watery, ichorous discharge consistent and healthy. Happily for suffering humanity, Holloway's Ointment, assisted by judicious doses of his Pills, accomplishes these ends with unfailing certainty.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Sept. 9: Setting Report: The No. 2 adit, to drive east, at 7 ft. per fathom, for the month. The south part of the lode, which we are now driving, is 5 ft. wide, composed of clay-slate, carbonate of barytes, sulphur, and stones of lead, with lode standing to the north 12 ft. wide. No. 4 stop, at 8 ft. 10 in. per cubic fathom for the month. The lode in this stop is worth 13s. per cubic fathom for lead.

ASHHETON.—M. H. Whitford, J. Craze, Sept. 9: The 50 end west, on the north part of the lode, has been driven since last report about 2½ fms.; the lode is yielding small portions of lead, but not sufficient to value. The 40 end, west of Brown's shaft, is being urged on as fast as possible; lode worth 2 tons of lead per fathom. The stop in the back of the 40, east of west end of Brown's shaft, is yielding 25 cwt. of lead per fathom. The stop west of No. 2 winze below the 30, will yield 1 ton of lead and blende per fathom. The stop in the back of the 8 west will yield 1½ ton of lead per fathom. We sampled 50 tons of lead for sale on the 16th inst.

BAMFYLDE.—S. Mitchell, H. T. Halsey, Sept. 8: Stowford Iron Mines: The lode in the various points fully maintains its value; we are pushing on as fast as the nature of the work will admit to get communication to Slader's shaft. Copper Mines: Saturday last was setting-day, when the following bargains were taken:—Four stops in the back of the 102 fm. level, by 16 men, and have two additional stops in the same level nearly ready; the stops are yielding a fair quantity of ore, and the average price is 72s. per fathom. Two stops in the 90, by four men each stop; the lode in this level driving west is a very promising one, and will yield about 30 cwt. of ore per fathom. We expect in a few days to set two stops in the back of the 112 fm. level. The lode in the 70 is 3 ft. wide, but hardly looking as well as it did. Operations will be resumed in a day or two at the 40. The western adit is nearly complete to No. 3 shaft.

BEDFORD UNITED.—W. Phillips, Sept. 10: I am pleased to report an important improvement in the 103 adit; the lode is now yielding 1 ton of ore per fathom, of good quality, and is looking very promising. We continue to drive by the side of the lode in the different other levels. The stops continue to look well.

BOG.—W. T. Harris, J. Barkell, August 9: The 175 west is communicated with No. 3 winze on the Whitestone lode, and we have now good ventilation, and are in a better position for getting away the ore. We have also intersected the south lode, which has improved our prospects considerably. This lode going east is worth 2 tons lead per fathom, and the end going west is worth 4 tons lead per fathom, and we believe we are on the point of a further improvement. In the cross cut at the 180 we have reached the hanging wall; the lode is 3 ft. wide, containing a small quantity of lead and blende. The pitches throughout the mine are yielding lead and blende as usual.

CAEGYON.—T. Hodge, Sept. 5: The 70 east end is suspended, and the men (six) put to cross-cut south, at 10 ft. per fathom. The stop in back of this level, just behind the end, is worth, for 15 ft. long, 15 cwt. of lead per fathom, by four men, at 5 ft. per fathom. The stop in the back of the 70, east of Thomas's winze, is worth 12 cwt. per fathom, by two men, at 4 ft. 15 in. per fathom. The winze below the 30 is down about 4 fms.; these men are removed to the 50 north cross cut, where I think that the north part of the north lode is standing before us; set to four men, at 4 ft. 15 in. per fathom.

CATHEDRAL.—J. Mitchell, Sept. 10: Since my last report the work at this mine has been carried on vigorously. The engine-shaft is now 3 fms. 4 ft. below the 20. The lode is fully 3 ft. wide, and worth 40s. per fathom, with every indication of becoming richer. The 20 west is worth 20s. per fathom. In the level driving east the lode is between 3 and 4 ft. wide, composed of gossan, green carbonate of copper, and spar—a splendid looking lode. In the 10 west it is from 3 to 4 ft. wide, composed of gossan, green carbonate of copper, and spar, as you will see, we have secured hold of a rich source of copper ore, and I am exceedingly satisfied with our prospects, feeling sure that in a short time this mine will be equal to the very best of this celebrated district ever produced.

CEFN BRWYN.—J. Paul, Sept. 7: In handing you a report on this mine, I beg to say that the water is out of the 104, and we have resumed the driving of that level east, where the lode is of a very promising character, and worth 1½ ton of lead ore per fathom; and we are likely to lay open some good ore ground here. The lode in the pitch below the 92 west is large, and worth 23 cwt. of lead ore per fathom. In the pitch at the 92 and 94 east, the lode is 2½ ft. wide, and produces 16 cwt. of lead ore per fathom. In the pitch over and below the 80 west, the lode is worth 18 cwt. of lead ore per fathom. Surface operations are proceeding regularly, and machinery working satisfactorily.

CRENVER AND WHEAL ABRAHAM UNITED.—Wm. Thomas, S. Arthur, Sept. 9: Sturt's Engine Shaft: The men are making fair progress in sinking; there is no change since last report on: the shaft is down about 5 ft. below the level. In the 215, driving west, the lode is 3 ft. wide, yielding 1 ton of copper ore per fm.; this end is still spare for driving, and not letting out much water; we are anticipating a change here shortly. In the winze sinking below the 215 west, the lode is 2½ ft. wide, producing 2 tons of copper ore per fathom. St. George's Shaft: In the 203, driving east on the south lode, and west of the shaft, the lode is 1½ ft. wide, yielding 1 ton of copper ore per fathom. In the winze sinking below the 190, east of shaft, the lode is 2 ft. wide, and produces 2 tons of copper ore per fathom. Woolf's Shaft: In sinking this shaft, which is about 4 fms. 2 ft. below the 208, the lode is 4½ ft. wide, yielding 5 tons of good copper ore per fathom. In the 208, driving west of shaft, the lode is 3½ ft. wide, yielding 2 tons of copper ore per fathom. Folly's Engine-shaft: The men are fairly progressing in sinking this shaft, which is now down to the depth of about 5 fathoms 2 ft. below the level, but the appearance of the lode continues to be of much the same character as when we last reported on it. In the 240, driving west, the lode is 3 ft. wide, yielding a little tin and occasionally stones of copper ore. Blewett's Shaft: In the 234, driving west, the lode is 4 ft. wide, producing a little tin, having a kindly appearance. In the 220, driving west, the lode is 5 ft. wide, and produces 2 tons of copper ore per fm. In the 210, driving west, the lode is 4 ft. wide, yielding 2 tons of copper ore per fathom, and is looking very promising for further improvement. Richard's Shaft: In sinking this shaft, which is about 2 fms. 10 ft. below the 200 fm. level, the lode is 2 ft. wide, having a kindly appearance. In the 210, driving west, the lode is 4 ft. wide, yielding copper ore to dress; this end is also of a more cheerful appearance. We are glad to say that our prospects are of a more cheerful and encouraging character in several places, the lode having a better appearance, especially in Woolf's shaft, which last week we reported as producing 3 tons of ore per fathom; it is now yielding 5 tons, and the quality of the ore is very considerably improved. There are employed this week—on the 208, 195 men and boys; on the 203, 84 men and boys; at surface, 66 men and boys; total, 332 men and boys.

CWM ELAN.—W. Goldworthy, Sept. 8: There is no change to note in the 20, west of shaft. No lode has been taken down since we resumed the driving thereof. In the 20 east we are 5 fms. in advance of the cross-course seen in the 10 (allowing for perpendicular); the lode has maintained its course till we cut into a soft joint this week which crosses the lode at an angle of 45°, and disordered the lode a little. As we get out of its influence the lode is re-making, and a nice branch of lead and blende ore coming in, as well as issuing very freely; a kindly lode is opening.

CWMYSTWTH.—Sept. 5: Levelfaw East, on Peneglan Lode: The lode is still 1 ft. wide, composed of clay-slate, spar, and small spots of lead ore. Levelfaw East, on the Middle Lode: The lode is 3 ft. wide, composed of gossan and spar, but poor for lead ore. There are no alterations worthy of remark in either of our cross-cuts since last report on. Our stops and tribute pitches are producing their usual quantity of lead ore. We still continue coasting on Copper Hill, but have not seen anything to value as yet. All the machinery is in good working order. We are getting on with the dressing as fast as possible, but the stuff is hard and poor. We sampled 12 tons of ore on the 1st instant.

DE BROCK.—T. Hodge, Sept. 7: We have nothing new to report this week. The stops are without change, and in Wilson's level we are making fair progress. All the lead parcel of lead sold is now at Aberystwith, and we are in course of dressing another parcel.

DEERPARK.—John Goldworthy, John Bucknell, Sept. 5: The sinking of the engine-shaft is progressing favourably. The stratum is of a favourable description for the production of copper; the branch dipping south towards the lode contains yellow sulphur of copper, and is very promising. Judging from the bearing of the lode from the 30 to the adit, we anticipate to have to sink 3 ft. to reach the north wall of the lode; if the underlie should be a little less, we shall have to go deeper. The machinery is in good working order, and we are in course of dressing another parcel.

DENBIGHSHIRE CONSOLIDATED.—J. Pryor, Sept. 10: In the 112 east the lode which had varied its course is now in its original position. In the 112 west we have a great change taking place; the lode is about 2 ft. wide, composed of clay-spar and limestone, and on the footwall we can drive in a borer 3 ft. ahead of us. There is also a large stream of water issuing, which is undoubtedly a good sign. In the 66 west cross-cut we have been extending north in the expectation of finding another lode. I am pleased to say that the ground shows more positively every day we shall be successful. In driving west out of the level we are in first-rate ground for producing ore in large quantities. The end is yielding lumps of lead 8 and 10 tons in weight, and from present appearances I calculate there is a good deposit not far distant.—Junction Shaft: The ground is very hard for sinking, and progress slow; but we must recollect that the same bar had to be passed through in Parry's shaft before the lead was discovered. Now that the 112 west is in such soft ground, we cannot be long before effecting the junction, enabling us to command both the eastern and western portions of the mine to considerable advantage, and it should be remembered that our operations can be conducted upon actual discoveries of ore.—Helen's Shaft: We are now commencing to drive out on the flat, and expect good things. The machinery throughout the mine is in good condition, and the men working well.

EAST CARADON.—James Kellow, Thomas Release, Sept. 9: Fair progress is being made in the 130 and 115 driving north on cross-course towards the caunter and Fawcett lodes. In driving east on branch in back of the 70, which is worth 12s. per fathom. At the 40, on Child's, we have commenced to cross-cut south to see if there is more lode in that direction.—Marke's Lode: In the 72 east the lode is 2 ft. wide, chiefly quartz. In the 60 east the lode is 1½ ft. wide, but disordered; the water is increasing in this level.

EAST CARADON.—James Kellow, Thomas Release, Sept. 9: Fair progress is being made in the 130 and 115 driving north on cross-course towards the caunter and Fawcett lodes. In driving east on branch in back of the 70, which is worth 12s. per fathom. At the 40, on Child's, we have commenced to cross-cut south to see if there is more lode in that direction.—Marke's Lode: In the 72 east the lode is 2 ft. wide, chiefly quartz. In the 60 east the lode is 1½ ft. wide, but disordered; the water is increasing in this level.

EAST VAN.—W. Williams, Sept. 10: We are still pushing on the 25 west, and are now within 53 fathoms of the Van boundary. The present end shows nothing sufficient to value, but the ground is more settled and regular now than it has been for a long time. The trial at the bottom of the adit, at a point 50 fathoms east of the shaft, we have abandoned, as it shows no improvement worthy of further trial in going down. The men are now set to drive eastward from the 25 cross-cut, where we are having occasional stones of ore, but not sufficient to value.

EAST WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Sept. 5: There is no change in any of the bargains since our last.

EAST WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Sept. 10: The lode in the 130, west of engine shaft, is 2½ ft. wide, and worth 8s. per fathom. There is no change in the 120 fm. level cross-cut north. The stop above the 120, west of engine shaft, is worth 8s. per fathom. The 110 east is looking much the same as last reported. The lode in the 110, east of engine shaft, is 13 in. wide, and worth 6s. per fathom; the ground is favourable for driving, and the end is letting out more water. The lode in the 95, east of cross-course, is 2 feet wide, and worth 8s. per fathom. The stop above the 95 east is worth 6s. per fathom.

FRON VELLAN.—Capt. Harper, Sept. 9: In the cross-cut driving north of level, west of deep adit, there has been no change since my last, the ground being of a very promising character; and as we are daily expecting to intersect the lode, providing it keeps its proper bearing; by what is seen in the deep adit cross-cut we cannot be far from meeting with it, but as the lode gets into the hill it is possible that it may take a throw or leave to the north; if so, we shall have a few fathoms more to drive before we intersect it. During the past month this level has been driven 4½ fathoms, and is set to four men, at 10s. per fathom, for one month, or cut the lode; the men to put out all their stuff to surface for the same. The cross-cut driving south of shaft has been driven during the past month 6 fms. 2 ft., which is very promising; the indications presented in the driving of this cross-cut afford abundant evidence to calculate on a speedy intersection of the lode, which we are expecting daily; this level has been re-set to nine men, for one month or cut the lode, at 8s. per fathom; the men to raise all stuff and water to surface for the same. We are pushing on the cross-cuts with all speed, as we are anxious to get at the lodes as soon as possible.

GAWTON COPPER.—George Rowe, George Rowe, jun., Sept. 5: There is no particular change in the character of the ground in King's engine-shaft sinking below the 105 since our last report, and our progress during the past week is very satisfactory. The lode in the rise and stop in the back of the 95 is worth 8s. per fathom. The lode in the stop in the back of the 70 east is worth 10s. per fathom. All other points without change.

GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor, Sept. 8: In the 78 east we find a part of the lode gone off, which we think is the same as we are now opening on in the middle level; it contains good stones of ore, and we hope it will soon open out to a valuable lode. In the 78 west the ground has favourably changed, very similar to what we had the one in before; we are looking for an improved lode here. The middle level west is worth 10s. per fathom. This level, east of winze, is worth 15s. per fathom; west, worth 20s. per fathom; we shall now prepare to sink on the lode, to come down on the 78, which will prove the north part in this level. The 65 east, on south part, is worth 8s. per fathom. We have cut a branch in the 65 east, and are getting on well. The lode in the 65 east is 8 feet wide, producing stones of ore occasionally, but the ground is harder than of late. The new western shaft is being carried down with the utmost dispatch, and fair progress is being made. The tribute pitches and other points are without any change worthy of remark since last report. The dressing, &c., is proceeding regularly, and we sold 21 tons of silver-lead ore yesterday, at 17s. 7s. per ton.

GOGINAN AND LEVEL NEWYDD.—Sept. 10: The lode in the 100 east is not looking quite so well as when last reported on, but still contains a good mixture of lead and copper ores, and we look forward to an early improvement again. The 100 west is looking better, and we hope to get on well. The lode in the 100 west is 8 feet wide, producing stones of ore occasionally, but the ground is harder than of late. The new western shaft is being carried down with the utmost dispatch, and fair progress is being made. The tribute pitches and other points are without any change worthy of remark since last report. The dressing, &c., is proceeding regularly, and we sold 21 tons of silver-lead ore yesterday, at 17s. 7s. per ton.

GORSIEDD AND CELYN LIVER.—W. Edwards, Sept. 10: Coeth Gwynen Shaft: The new engine is working admirably, taking more water out in 48 hours than the former did in 72. We expect the sumps to be drained by to-morrow night, so that we shall be able to get on with the work. The lode in the 100 east is 8 feet wide, producing stones of ore occasionally, but the ground is harder than of late. The new western shaft is being carried down with the utmost dispatch, and fair progress is being made. The tribute pitches and other points are without any change worthy of remark since last report. The dressing, &c., is proceeding regularly, and we sold 21 tons of silver-lead ore yesterday, at 17s. 7s. per ton.

GREAT RAKE LEAD MINES.—Brassington, Derbyshire.—William Fearn: Monthly report: August 10: I have opened out the new climbing road to the depth of 30 fathoms; at this level I have also opened a tramroad to the length of 60 yards, which shows a very fine vein of caulk, intermixed with good samples of lead ore, which I have brought up to the surface ready for the washing and crushing apparatus; this drive is of a most interesting character, as in about 5 fathoms further west it will intersect another pipe vein, and at this point I expect to get a quantity of lead ore; the New Wagon Gate is running west.—No. 2: Proceeding from the engine-shaft in an easterly direction, at the depth of 40 fms., this point leads to what is called the Hard Hole; here we have also a good work of lead ore.—No. 3: From this point to the top of the Wagon Gate, which is about 45 fms. in depth, we have a good work of both old and new workings, which I have brought up to the surface ready for the washing and crushing apparatus.—No. 4: The next point is called the Chain Turn; here we have also a good work of lead, and the vein runs soft, and is easy to work. No. 5 is the Wagon Gate (90 yards long), which is laid with tramway, and ready for use.—No. 6: Leading out of this gate is the Ladder Hole; this vein contains fine lead ore at a depth of 55 fathoms. No. 7 is the Spar Turn; this also is another fine vein, well intermixed with spar and lead ore.—No. 8: This is the top of the limestone; at this carriage it is flat works, and the vein is hard, and requires blasting down; this vein is very fine, and well intermixed with caulk and lead ore; at this point it yielded some of the largest lumps of lead ore found in Brassington; there have been solid lumps of the which weighed over a ton.—No. 9: This is at a depth of 70 fathoms, and is called the Shale vein; here we have lead ore in four or five different points. I can point out many more places of lead ore in this part of the mine which will pay well for working. This is a mine well worth personal inspection, as the new Wagon Gate from the Young Bonny Lad shaft will open out a many cross veins. The new shaft is sunk about 17 fathoms, and we are getting on in course of sinking. The lode in the 100 east is 8 feet wide, producing stones of ore occasionally, but the ground is harder than of late. The new western shaft is being carried down with the utmost dispatch, and fair progress is being made. The tribute pitches and other points are without any change worthy of remark since last report. The dressing, &c., is proceeding regularly, and we sold 21 tons of silver-lead ore yesterday, at 17s. 7s. per ton.

GREAT RETALLACK.—John Harris, Sept. 5: There is no change to report in the lode at 40 east since last week; it is producing much the same for blende. The men are progressing fairly with their driving, and we have only 2 fms. further to drive to get under the perpendicular of the Peru silver lode at the 30, so I hope we shall meet with something good very shortly.

GREAT WHEAL LOVELL.—Joseph Prisk, Sept. 10: Good progress is being made in driving the 44 cross-cut south. In the 34 cross-cut the ground is rather hard and spare for working, consequently we are not so far advanced as we expected. The lode in the 34 cross-cut is 3 ft. wide, and worth 8s. per fathom; the tinstone is becoming richer as we sink, and is similar to what I have seen broken in the old mine. In the cross-cut north in the 34 we have intersected the lode, which is 18 in. wide, worth 8s. per fathom; the ground here is exceedingly easy for working, and quite congenial for the production of tin. I may also add that this lode is whole from the 34 to surface, and as soon as we have opened up a little I expect to get a large quantity of moderate quality tinstuff from this point. No change to notice in any other bargain.

HEATH COLE.—John Kirtle, Sept. 8: The main shaft has been completed to the level below the shallow adit, and is now open to drive both east and west on the course of the lode; the west end is very good for ore, but the east end is not so rich at present; this, however, will soon improve, and become more productive. The winze sinking below the 12, about 15 fathoms west of shaft, is down 11 fathoms, and is yielding very good ore. The stops, both in the shallow adit and 12 fathom levels, are as good as usual. The lode in the intermediate level has much improved in character, and is now producing a little ore, and, judging from present appearances, I believe we shall soon get into more productive ground. The lode in the 12, about 15 fathoms west of shaft, is down 11 fathoms, and is yielding very good ore. The stops, both in the shallow adit and 12 fathom levels, are as good as usual. The lode in the intermediate level has much improved in character, and is now producing a little ore, and, judging from present appearances, I believe we shall soon get into more productive ground. The lode in the 12, about 15 fathoms west of shaft, is down 11 fathoms, and is yielding very good ore. The stops, both in the shallow adit and 12 fathom levels, are as good as usual. The lode in the intermediate level has much improved in character, and is now producing a little ore, and, judging from present appearances, I believe we shall soon get into more productive ground.

HINGTON DOWN CONSOLS.—James Richards, Sept. 12: Bailey's Shaft: In the rise in the back of the 140, against Fitz's winze, the lode is 2½ ft. wide, producing saving work of copper ore. The lode in the three stops in the back of the 140 west is worth on an average 23s. per fathom. In the 120 west the lode is 3 ft. wide, composed of strong capel, peach, quartz, mundle, and a little black oxide and malleable copper. The lode in Fitz's winze, sinking below the 120, is still worth 12s. per fathom. We continue to carry 5 ft. of the lode in the 110 west, which is worth 20s. per fathom, presenting the same strong promising indication as before. In the stop in back of the 110 west the lode is worth 15s. per fathom. We sampled on Monday last 60 tons of ore, the produce of the past two months.

LADY CONSTANCE.—Sept. 10: I am glad to say that the ore in the 55 yard level, at Katie's shaft, has improved since last week, and I think we shall be able to make some good returns from here. There is no change in the cross-cut at the old shaft since last week.

LEISURE.—Sept. 10: Glogfaw: The 75 is now within 2½ fathoms to the line of the cross-course, and which we hope to reach in a month. We have resumed driving the 60 east, which is about 4½ fathoms behind the winze now sinking below the 45, in which winze we have 3 fathoms yet to sink to communicate to the above named level, and when completed this will throw open a good length of stopping ground. We have not yet intersected the north part of the lode in the 20, which is being pushed on by four men. The 45, about 40 fathoms west of the engine-shaft, is being driven 5 fathoms east of the cross-cut, on the north part, where the lode maintains its size, and looks promising. The winze below the deep adit is down about 2 fathoms, and there are about 10 fathoms more to sink to lode to the south, and the south wall of the lode to the north of the shaft, and all the best bunches we have yet seen in Glogfaw have been under the slide. The 105 will soon be under the best bunch seen in the eastern part of the mine.—Graigoch: The lode in the 12, east of eastern shaft, is divided by soft ground, and not so good for lead ore as when last reported, but still maintains its size, and lets out more water. The 60 west is all in lode, the lead-bearing part of which is standing to the north, and is very hard and wet. We have a winze sunk below the 47, about 5 fms. in advance of the end, 7 feet; the lode is 6 ft. wide, worth 2 tons of lead ore per fathom, but the water being very quick we have to bring forth the level to drive it. The 60 east is full of stuff, which gave way while the water was in. This level, together with the western one, is about entering the bunches of ore worked on in the upper levels. Froegoch Big Pool is 5 ft. below the level, Rowsey 2 ft. ditto, and we have a good supply from Tyn-y-welch, which is a considerable aid. Lyons has Mine 14 tons of lead ore, and from Glogfaw 15 tons of silver-lead ore. Our machinery is in good order, and in full operation.

NEW ROSEWARNE.—E. Hosking, W. Bennetts, Sept. 5: The lode in the 114, east of Bickford's shaft, is 4 ft. wide, and worth 7s. per fathom. The stop below the 84, west of Bickford's shaft, is worth 8s. per fathom for tin and copper ore. The lode in the 58, west of Pool's shaft, is 5 ft. wide, and worth 8s. per fathom. This end is letting out more water, and looks kindly. The lode in the 46, west of Pool's shaft, is 3 ft. wide, and worth 7s. per fathom.

NEW SOUTH MERLLYN.—R. Rowlands, Sept. 10: We have a fine-looking vein driving north from the main shaft, yielding at present lumps of ore. Judging from the heading side, I cannot help thinking we are approaching a good body of lead.

NEW WEST ROSEWARNE.—J. Curtis, Sept. 9: The 24 is rather hard and spare for driving; it is driven 4½ fathoms. In the 10 lode is looking better, a cross branch has crossed the end, and we have some good work for tin.

NORTH POOL.—W. C. Vivian, P. Clyno, Sept. 10: We cannot yet report the ending of the lode, but are meeting with branches, some of which are 2 in. and some 3 in. wide, all containing more or less copper ore. The rock is now of precisely the same congenial character as we have recently been reporting on. The evidences are strong that the lode is close at hand, and we must exercise patience and perseverance, pushing on the cross-cut as fast as possible. This you may depend on our doing, and we still have confidence in soon reporting the cutting of a lode, which will greatly improve our position.

NORTH TRELEIGH WOOD.—Wm. Tregay, Sept. 9: The lode in the deep adit west produces very good stones of copper ore, and we are looking forward to an improvement. At the trial shaft west the ground seems to be changing a little, but not yet very greatly. As soon as we get down in the lighter kilns which is underlying the present rock, we expect to find the lode productive.

OLD BOTTLE HILL.—R. Unsworth, Sept. 9: The 46 is the same as last reported. I have taken the men from this place to assist in dressing. In the winze in the bottom of the 36, east of Rowe's shaft, the lode is full 3 ft. wide, worth 10s. per fathom. In the stops east of winze, in the bottom of the 36, the lode is 3½ ft. wide, worth from 12s. to 15s. per fathom. Jones's pit, in the back of the 12, is much the same as last reported. We shall have 10 tons of good quality ore for sale next week.

OLD BREBURGETT.—W. Hancock, W. T. Bryant, Sept. 9: We have nothing particularly new to inform you of since our report last week. We have set the lode to drive south of the shaft 2 fms., take out penthouse, divide and case the shaft from the 80 to the 90, cut tip-plate, and take out a piece of ground the western side of the shaft, &c., in order to commence driving north at this level when the plan is completed; this work is set to nine men, per contract 677. The weigh-bridge is fixed in its place. The house will be covered in this week, and we are going on with the new jigging-machine work. We will send you a detailed report next week.

PARRY MOUNTAIN.—J. Mitchell, Sept. 10: Everything is going on in regular order here, both underground and at surface. The several stops are yielding much the same as for some time past. I am pleased to say that the tribute pitches are looking a little better, and that since the last setting-day we have set three more pitches to some of our old hands who have returned from other districts. The recent heavy showers are having a beneficial effect upon the precipitation pit, and we have this week commenced clearing up the precipitate.

PEDN-AN-DREA UNITED.—Wm. Tregay, Wm. Frideaux, J. Pope, Sept. 5: Sump: In the 160 cross-cut north, we have taken down the lode to four men, and the lode has improved in appearance and value, being now worth 20s. per fm. In the 140 fm. level east winze the lode (Martin's) is worth 33s. per fathom. In the 140 fm. level west end the lode (Martin's) is worth 14s. per fm. In the 130 west end the lode (Martin's) is worth 10s. per fm.—Cobbler's: In the 120 west winze the lode (Martin's) is worth 15s. per fathom. In the 120 west end the lode (Martin's) is worth 10s. per fathom.—Cardozo's: In the 90 west rise the lode (north) is worth 15s. per fathom. In the 80 west end the lode (north) is worth 10s. per fathom. In the 70 west end the lode (north) is worth 15s. per fathom. In the 55 west end the lode (north) is worth 15s. per fathom. In the 47 west end the lode (north) produces stones of tin.—Crichtley's: We are making fair progress sinking below the 20, and expect to reach the 30 in five weeks. The 90 rise is now about 2 fathoms above the back of the 80, and the ground is still stiff for rising, but will, undoubtedly, improve as we go up. In the 140 fm. level cross-cut the ground is favourable, and good progress is being made. We sold on Monday last 17 tons 4 cwt. 2 qrs. 8 lb. of black tin at 55s. 15s. = 960s. 9s. 10d. No other changes to report.

PEN-Y-LLY.—J. Harris, J. Harris, Sept. 9: There is no material change in any of the bargains throughout the mine, each yielding lead in quantities equal to last report. A full report shall be sent next week.

PLYMOUTH.—John Garland, Sept. 9: Friday last being our pay and bi-monthly setting day the following bargains were let:—To drive the 24 fm. level east of Hughes's winze, by six men, at 8s. per fathom; these men are at present taking up the sole of the level from point of communication, as the winze was not deep enough for the same level. To rise over this level in line of new shaft, at 12s. per fathom, by six men. This work shall be pushed on as fast as possible. The cross-cut north of the 12, towards north lode, to four men, at 18s. per fathom. The ground in this end is still very hard, and little progress can be made. To stop the back of the 12, east of Williams's winze, by six men, at 3s. 5s. per fathom; lode produces 1 ton of lead ore per fathom. To stop the back of the same level, east of cross-course, by four men, at 3s. 10s. per fathom; lode yields ½ ton per fm., but will improve. I may here add that this is a new stop, the former one between these two having been worked out. The cross-cut north of the adit level has also been let to six men, at 8s. per fathom. Here we frequently meet with cross-heads, running in the same direction as the lode should, which, from past experience, is favourable. A stop is let in the back of the level, to cut any more cross-heads, the lode averages a produce of 1 ton of lead ore per fathom. Another stop is let in the back of this level, east of cross-course, to six men, at 3s. 10s. per fathom; the lode at present contains a great quantity of blende, produce ½ ton of lead ore per fathom. This stop I also hope will improve; it looks as if it would, being in the lode vughy, which is favourable. I regret that the shaft below the 12, on new lode, has not presented any favourable indication; the lode has certainly increased in size, but instead of continuing to be lead-producing it now produces blende only. I do not think it at all advisable to lay out any more money in this bottom, but still hold a belief that this small lode may give some produce above this level, which can be proved by stopping the back. The men that were engaged in this sink are now employed in making road (permanently) to the end of the 12, west of engine shaft, which level I would advise to be driven. We have an abundant supply of water, and drawing and dressing are being pushed on without hindrance. Our monthly sampling of 40 tons takes place on Saturday, the 12th inst., when samples will be issued as usual.

PORT NIGEL.—J. Manley, Sept. 9: We have during the last few days taken down the lode in the 34 east, which has improved since my last, and is now worth 20s. of lead ore per fathom. We have also taken down the lode in the 44 east, which still continues worth fully 3 tons of lead per fathom. Fair progress is being made in the winze sinking below the 44 east, and we have six men making preparations for sinking the shaft below the 44; this will be urged on with all speed.

PRINCE OF WALES.—J. Gifford, Sept. 8: In the 77 east the ground is spare for driving, and letting out much water. No lode has been taken down since last report. In the 65 east the lode is improving in size, and yielding a little black oxide of copper, and malleable. I am of opinion that there is more lode in the north in this level, about 15 fms. behind the end. There is no reason to suppose the ground is easy for progress, and, as the lode is still in the end and past this point to drive north to prove it.—Tribute: In a pitch in the back of the 77 east the men have met with a good branch of malleable and black copper, from which they will raise a good parcel of ore. No other change.

PRINCE OF WALES.—J. Gifford, Sept. 10: No change in the mine to notice. We are getting on well with our sampling, which, we think, will be the best we have had for some time.

QUEEN'S (Silver-lead).—E. Evans, Sept. 9: Since my last report I have begun to sink the Gladstone shaft deeper below the 140 yard level, and with four men I am making good progress; the lode is of a good quality, and very strong. The 120 yard level is of a very promising ground, of limestone, spar, and clay. The 80 yard level is rather hard for progress, being a narrow joint of spar and clay, with spots of lead in, which I trust will soon open out with good results; the roof is also a fair joint of spar, clay, and lead, but not quite so good as what I have seen it. The 140 yard level, west of Cambrian (the Hopewell lode), is improving in appearance, and ground, but narrow, with clay and spar of good character.

ROMAN GRAVELS.—A. Waters, Sept. 10: The mine is looking quite as well as when reported on last week. To-day we have sold 280 tons of lead ore, realising 3s. 11d. 10s.

ROOKHOPE VALLEY.—D. Brown, Sept. 10: The stops and rises in the upper levels are about the same as I last reported. No. 3 winze from the 26, I stated as commenced in my last, is now down 11 ft., has very much improved, and will yield 3 tons of lead ore per fathom. This point is now about 140 fms. from shaft. These winzes are being sunk for a future benefit, to open out the mine quicker from the 42. The rise from the 42 will be holed in a day or two. When the lode is open we can open out stops and push on the level as quick as possible. I will sample 20 tons of lead ore to-morrow.

ROSEWALL HILL AND RANSOM UNITED.—Wm. Eugehlo, John Widd, Sept. 10: The 60, driving west of Ransom shaft, has improved since our last report: lode 2 ft. wide, worth 8s. per fathom, and looking promising for further improvement. The north Carbona, in the back of the 100 fm. level, is looking a little better than when last reported on; lode 18 in. wide, worth 12s. per fathom. It still believe that this lode will become a very valuable one again, as the lode is all we can desire for the production of tin in large quantities.—Goole Poles: We have taken down the lode in the 25 fm. level, driving west of the new flat road shaft, and am happy to say that it is quite up to our expectations.—2 ft. wide, worth 20s. per fathom. The lode in the 25 and east is now yielding tin in paying quantities—18 in. wide, worth 8s. per fathom. The 16 fm. level, driving west of cross-cut, is not looking quite so well as when last reported, as there is a hard bar of gossan in the present end, which has changed the character of the lode. The stop in this part back and bottom of this level continue to look well, and our returns we extend out of the mine are increasing. In conclusion

intersecting other east and west lodes which are known to exist in your premises to the east of your property. The nature of the rock in the present cross-cut is now in a very unsettled state, having a great deal of small joints of spar,

fathom. The 130 east is worth 10*l*. per fathom. The 140 east is worth 7*l*. per fm. The 150, east of Goodinge's, carries a little tin. The 160, east of sump, is worth 8*l*. per fathom. The 180 is worth 5*l*. per fathom. The 150 west is poor. The 140, west of incline, is worth 10*l*. per fathom. The rise in the back of the 120 west is worth 10*l*. per fathom. The 40 west is worth 5*l*. per fathom. We are forcing on Hind's engine-shaft, by 12 men, but the ground continues very hard.

JAMES H. CROFTS

The following are the closing prices:—Carn Breas shares have been moderately dealt in at 54 to 58. A small business has been done in Cook's Kitchen shares at 9½ to 10½; a few of these shares are "beared." Dolcoaths shares have been inactive, 44 to 46. East Pool called 9 to 10. East Lovell flat and duller, 10 to 11. Providence, 3 to 4, but nothing doing. Rosewall Hill, 5s. to 7s. 6d. A good business has been done in South Carn Brea at from 2 to 2½; there seems to be a better enquiry for these shares. South Condurrow neglected, 3½ to 3½. In South Crofty shares a little business has been done at lower prices; they close 11 to 11½. In West France nothing doing, called 9½ to 10, same as last week. Tincofts have been largely dealt in at 10½ to 11½; it is being a little better to think it might close their books. West Basses shares have received a fair share of attention, and a good many have changed hands at 8½ to 8½, at which they close. West France enquired for at 9½ to 10½, but there has not been much doing in them. West Seton shares are more enquired for, price 19 to 21; Capt. W. Teague, jun., inspected this mine on Monday, and gave, on the whole, a good account of it: If this mine is worked with strict economy it ought to pay its cost at the present price of tin; there has been a little talk in the immediate district respecting

During the latter part of the week Prince of Wales shares have been freely dealt in, chiefly in consequence of a transaction having taken place in 1000 shares at a high price. The operation was, however, a speculative one. The mine is, we are informed, looking rather poor at present, and existing prices can scarcely be war-

the count-house expenses, and they should at least be curtailed. West Tolgus shares have been largely dealt in, and have improved from 64, 65 to 67, 68, at which they leave off. Kitty (St. Agnes), 6½ to 7, quiet. Wheel Uny, 1½ to 1¾. Botallack shares weaker, 20 to 22½.—West Briton.

IMPORTANT DISCOVERY.—An important discovery was made at Creener and Wheel Abraham Mines, Wendron, recently, a lode having been discovered at Woolf's shaft. It is about 5 ft. wide, composed of purple copper (horse flesh) and bell metal ore, and very rich. This discovery will have a very beneficial effect upon the district, which at present is in a very depressed condition. The present managers have been vigorously prosecuting operations for the past 12 months, and are at last rewarded by this discovery. The mines are worked chiefly for copper, but a little tin is produced.

WHEEL MARY TIN MINE.—This mine was offered for sale by the mortgagee on Monday, and after a spirited competition was knocked down to Mr. John Martyn, the well-known and much respected founder of Wadebridge, for the sum of 1100*l*. Mr. Martyn, it is understood, has associated with him in the purchase some gentlemen who, having great confidence in the mine, have resolved to work it in a legitimate manner, where there seems to be little doubt of its proving a great prize. Some surprise was manifested at the non-appearance at the sale of any representative of the company, particularly as it was stated that the mortgagee had offered to sell the mine on payment of the interest and the dead rent for which the landlord had distrained.

WHEEL VINCENT.—This sale was held on Thursday as a going concern. It was started at 400*l*, and bought in at 3000*l*, and there was no sale. The reserve was considered about the value of the machinery, materials, &c.

FRANK MILLS.—(Telegraph.)—The lode in the 115 south has improved, and now producing 6 cwt. of lead per fathom; a very promising lode.

* * With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Iron and Steel Institute at Barrow; Barrow Hematite Iron and Steel Works; On the Tin District in New South Wales; Sulphur in Iceland (C. C. Blake, J. J. Hjalte); Coal Mining in Italy—the Sasso Forte Collieries Company (W. J. Jacob); Mineralogy, No. VI. (W. White); Royal School of Mines, London; To the Landlords of Cornwall (R. Fretwell); Cornish Mining; Old Talsarnagh Mine, Kingston Valley; Hordbarrow Mining Company—A New Gold Region—Foreign Mining and Metallurgy—General Engine and Boiler Company's Non-Condensing Engine (Illustrated)—Patent Matters, &c.—Meetings of the Canal Street Ironworks, the London Company, Gaulty Kanawha Coal, Great Wheel Vor, Cwm Ricket and Maesnant Lead, Perkins Beach, West Bryn Celyn, East Basset, and Lanestosa Lead and Zinc Companies.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, SEPT. 11, 1874.

COPPER.				IRON.			
Best selected...	per ton	87 0	0-88 0	Bars Welsh, in London	9 5	0-9 6	7 6
Tough cake and tile...	85 0	0-86 0	0	Do., to arrive	9 5	0-9 6	7 6
Sheet and tile...	91 0	0-93 0	0	Nail rods	10 15	0-11 10	0
Boils	93 0	0-95 0	0	Do., in London	11 0	0-11 10	0
Old	80 0	0-85 0	0	Bars, ditto	11 0	0-14 0	0
Australian	86 10	0-88 10	0	Hoops, ditto	12 0	0-13 0	0
Wire	per lb.	0 1 0½	0	Do., at works	10 0	0-11 0	0
Tubes	per lb.	0 1 0½	0 1 1	Hoops, ditto	11 0	0-14 0	0
BRASS.				Sheets, single & plates	10 0	0-15 0	0
Sheet	104d.-11d.			Pig No. 1, in Wales	5 0	0-6 10	0
Wire	104d.-11d.			Refined metal, ditto	7 0	0-8 0	0
Tubes	11d.-12d.			Bars, common, ditto	8 7	0-8 10	0
Yellow metal sheathing	8d.-8½d.			Do., merchant, f.o.b.	10 0	0-10 0	0
Sheet	7½d.-8d.			Do., in Tyne or Tees	10 0	0-10 0	0
SPELTER.				Do., railway, in Wales	7 0	0-8 0	0
Foreign on the spot	22 5	0-22 10	0	Do., Swed. in London	17 0	0-17 10	0
to arrive	22 7	0-22 10	0	To arrive	17 5	0-17 10	0
ZINC.				Pig, No. 1, in Clyde	4 7	0-5 10	0
In sheets	29 0	0-29 5	0	Do., f.o.b. Tyne or Tees	4 11	0-5 15	0
QUICKSILVER (p. bot.)	23 0	0-23 0	0	Do., Nos. 3, 4, f.o.b.	4 10	0-5 10	0
TIN.				Railway chairs	5 0	0-5 5	0
English blocks	95 0	0-96 0	0	spikes	12 0	0-14 0	0
Do., bars (in brls.)	96 0	0-97 0	0	Indian Charcoal Pigs	10 0	0-12 0	0
Do., refined	97 0	0-99 0	0	in London, p. ton	10 0	0-12 0	0
Banco	99 0	0-100 0	0	STEEL.			
Straits	92 10	0-93 0	0	Swed., in kegs (rolled)	per ton.		
Australian	90 0	0-91 0	0	Ditto (hammered)	19 10	0-20 0	0
TIN-PLATES.				Ditto, in faggots	21 0	0-22 0	0
10 Chinolet, 1st qua.	£1 16	0-Nom.		English, spring	23 0	0-25 0	0
IX Do., 1st quality	2 0	0-2 0		LEAD.			
IX Do., 2d quality	1 15	0-1 15		English Pig, com.	21 5	0-21 10	0
IX Do., 3d quality	1 10	0-1 10		Ditto, L.B.	21 7	0-22 0	0
IX Coke	1 7	0-1 9	0	Ditto, W.B.	22 0	0-22 0	0
IX Ditto	1 13	0-1 15	0	Ditto, sheet	23 0	0-23 0	0
Canado plates, p. ton	19 0	0-19 0		Ditto, red lead	23 0	0-23 10	0
Ditto, at works	18 10	0-18 10		Ditto, white	30 0	0-32 0	0
				Ditto, patent shot	25 0	0-25 10	0
				Spanish	21 0	0-21 2 6	0

* At the works, 1s. to 1s. 6d. per ton less. † Add 6s. for each X.
Terne-plates 2s. per box below tin plates of similar brand.

REMARKS.—There is very little difference in the state of business generally, and scarcely any fresh feature of importance has arisen requiring particular comment. The transactions have been of a limited character, and merely sufficient to satisfy existing requirements. The present scale of quotations does not offer any inducement to purchase for forward delivery, and it is, therefore, most likely that reductions will have to be submitted to before the demand is permanently increased. After a long run of high prices a reaction is not only expedient, but absolutely necessary, to restore the ordinary flow of business, and until satisfactory reductions are made the markets will remain in a state of suspense; there may be temporary revivals in the meantime, but nothing permanent and regular will be ensured until a readjustment takes place. The restrictions of trade, from which we have been and are still suffering, are entirely due to the maintenance of high prices beyond a proper period; there has been no over-trading, and no disturbances arising from political or monetary causes. The prospects are favourable for business, providing it can be translated upon reasonable terms, and it only remains for sellers to reduce their prices to such a point as will inspire universal confidence. Stocks everywhere are admitted to be light, but dealers will not replenish them without first knowing that they can do so safely, and consumers, as yet, do not exhibit any eagerness to avail themselves of current rates. Generally speaking, to stimulate trade, dear prices have to be succeeded by cheap ones, but this will probably not be required in this instance; moderate sales, no doubt, will suffice, as the good effects of an abundant harvest in Europe and elsewhere will go far to re-establish trade upon a firm and sound foundation. The blessings of a good harvest, with almost universal peace, cannot fail to exercise a most salutary influence.

COPPER.—The market for the most part has assumed a quiet but tolerably steady appearance. The price of Chili bars has only slightly oscillated between 77*l*. and 78*l*. per ton, sales at the commencement of the week being reported at 77*l*., after which a gradual stiffening ensued, and business has been reported at 78*l*. 10s. cash. Orders for English manufactured have been limited, and sellers have submitted to a reduction. In yellow metal, also, sellers have given way ½*d*. per pound, both for sheets and sheathing, but prices are again firmer, and the fall has been partly recovered, sales having been effected at 75*l*. per pound, and 75*l*. 10s. is now quoted. The combination which formerly existed among makers of yellow metal for the purpose of regulating the sale price in the home and continental markets has ceased to exist, and each firm now acts independently of others. It is, therefore, now an open trade, and consumers naturally expect to benefit by the change. In future there may be greater fluctuations than hitherto, as competition is sure to create more animated markets, and add to the amount of business.

IRON.—It is very strange while shipments of pig-iron continue to decrease that the price is not only upheld, but an actual advance obtained. Stocks, however, keep very light, and upon this operations are based. During the week a rise of about 3*s*. to 4*s*. per ton has taken place, and a firm market at the improved price. Makers hold out for high rates for shipping iron, and No. 1 g.m.b. are not to be bought under 87*s*. 6*d*., up to 110*s*. for Gartsherrie.

Week ending Sept. 6, 1873	Tons	10,629
Week ending Sept. 6, 1874	Tons	9,483
Decrease		1,146
Total decrease since Dec. 25, 1873		151,322

The Board of Trade returns for August show a falling off in the exports of all iron, and after the deliveries of the next two months, which must complete the shipments to the northern ports for this season, the quantities will be still further diminished, and compare very unfavourably with the two preceding years. The most serious falling off is in the American demand for rails, and this branch of the trade is, perhaps, the least promising for the future. The commercial community of America are gradually recovering from their severe panic of last year, but there remains a good deal yet to do to re-establish their credit on a satisfactory basis. It can only be accomplished by dint of very great care, and it will take time to efface the recollection of their thrice of repudiation. There are not many ironmasters in England who would take their bonds in exchange, or even in part payment, for their rails; and the American buyers—for some little time to come, at least—will have to pay cash terms. Independently, however, of the financial position of the American community, they can ill do better as regards price in their own country; and while this continues to be the case it is not very likely that we shall get much of their business. Such ironmasters who have laid themselves out specially for American rails are, as a matter of course, doing comparatively little or nothing at the present time. The vexatious question of wages, ever cropping up and agitating the iron districts, seems to remain as unsettled as ever, and both masters and men appear as if they never would arrive at a final arrangement. The accounts from Wales are better, and there is reported more doing in rails. In merchant bars the price in London has declined 2*s*. 6*d*., per ton, and Welsh bars have been sold to arrive at 9*l*. From Mid-Devonshire there is no chance to report—ironmasters are rather afraid of a possible stoppage on account of the attitude of the Durham colliers, and have been eager to secure

supplies of coal. Rails are spoken of as being in better request, but bars at present have not participated. Ship plates in fair demand. Staffordshire descriptions remain unsold; sellers find it impossible to sell at any advance, and however much some of the ironmasters might wish to work up prices, that course must be abandoned until a more propitious season.

LEAD.—The firmness of the market continues, and sellers are anticipating higher prices. Not only is there a satisfactory enquiry, but the supplies of Spanish are limited, and this will probably be so while Spain keeps in such a disturbed state. As there is no appearance of the civil war terminating, but rather the contrary, lead will, no doubt, maintain its present position for some time to come.

SPELTER.—The principal transactions that have been reported in this metal have been for deliveries at out ports, and the prices realised have ranged from 21*l*. 17*s*. 6*d*. to 22*l*. 5*s*., the market closing at the latter price. In hand, sales have been made at 14*l*. 15*s*.

QUICKSILVER.—The advanced price of 23*l*. does not appear to have materially affected the demand, and sellers are firm at the quotation.

TIN.—Throughout the week the market has been steady, and prices have only undergone slight alterations. There is an absence of speculation, and no very decided expression of opinion can be gathered, either by the nature or extent of the transactions. The present demand is chiefly for home consumption; large stocks of foreign exist in first hands, but as they are well held, and prices are fairly reasonable, they do not make a very marked impression. It is the future supplies from Australia that keep the market in a state of suspense, and operators are waiting reliable information in regard to the estimated annual quantity and the cost of production and transit before venturing to enter upon any movement, either in an upward or downward direction. Straits has ruled between 91*l*. and 93*l*.; Australian, 90*l*. to 90*l*. 10*s*. On the 29th inst. there will be the Dutch Trading Company's sale in Holland, when 20,300 slabs of Banca will be offered; but the result is not likely to affect prices of foreign tin on this side, as the relative value of Banca is already so much above that of any other kind that there is plenty of room for a good fall before it could materially affect them.

TIN-PLATES.—Orders are not very plentiful, and the reduced prices are not deemed sufficiently tempting to influence buyers to take more than they want for present use.

STEEL.—German monopolises the demand to the exclusion of Swedish, the difference between the two makes being about 5*l*. per ton. The former is sold even below the cost of Swedish iron.

Messrs. Vivian, Younger, and Bond—**COPPER.** On the 3rd inst. the usual advice came to hand by cablegram from Valparaiso of charters for the second half of August, representing 2100 tons in fine copper (1800 tons bars and ingots and 300 tons ores and regulus), rather a full quantity, seeing that the charters for the previous fortnight were 2000 tons, and 4100 tons for the month of July. The demand, however, has been good throughout the week, and, with only moderate quantities of Chili bars offered from day to day, the price has gradually hardened from 77*l*. to 78*l*., at which several hundred tons have sold, chiefly per steamer to arrive during this and next month, closing buyers at 78*l*., sellers looking for an advance of 10*s*. to 20*s*. per ton. In Australian fair sales of Wallaroo cake took place at 88*l*. to 89*l*., and ingot realised 88*l*. 10*s*., chiefly for export. Banca cake sold at 86*l*. 10*s*. to 87*l*. and ingot 87*l*. 10*s*. to 87*l*. 15*s*.; other brands 82*l*. to 85*l*., as in quality. The demand for manufactured is hardly so active at 84*l*. for strong sheets, tough and best selected selling at 85*l*. and 86*l*. Yellow Metal 73*l*. 6*d*. to 8*d*. sheets and sheathing. Tin: Straits has fairly maintained its value at 92*s*. to 93*s*., and for arrival 91*s*., while Australian ingot has offered freely at 90*s*. to 90*s*. 6*d*. spot and landing, at which 250 tons have sold, chiefly at the former figure. At the Dutch Trading Company's sale, announced for the 29th inst., 22,300 slabs will be offered, being about the quantity expected. English ingot in fair request at 94*s*. 6*d*. to 95*s*. Tin-plates: There is more demand, and prices are steadier.

Messrs. Henry Rogers, Sons, and Co.—The activity in the metal trade appears to increase. Iron, copper, spelter, and lead are all dearer, while the demand for tin has improved. Iron: Scotch pigs are 4*s*. dearer, Middleborough, 2*s*. In Staffordshire finished iron all the mills seem more busy, and makers this week are obtaining 2*s*. 6*d*. advance over quotations of a week or two back. Rails would seem to be in more demand, but consumers generally have but little faith in present quotations, and only buy for immediate wants. The general impression in the trade is that colliers' wages and coal will both come down before the close of the year, and thus enable the ironmasters to reduce their quotations very materially. Such a state of things would, no doubt, greatly benefit the iron interest, but it is not easy to see how such a reduction will be effected.

COPPER. A slight reaction took place in this metal early in the week, and some hundred tons of bars were quoted at 77*l*. This quotation brought in eager buyers, and the price has subsequently risen 20*s*. to 30*s*., with very little copper offering. Wallaroo has realised 88*l*. 10*s*., Banca 87*l*. 10*s*. In English a very large trade has been done, both in ingots and cake, at a fraction under and up to full rates, consumers being the principal buyers. Spot copper is particularly scarce, and the supply of some Chili brands very limited; 78*l*. was paid yesterday, 79*l*. being now the price asked. There is more doing in yellow metal, but the competition is very keen. Tin: More business has been done in the past week, importers being free-sellers. The demand for plates is falling off.—**SPELTER.** A good trade is doing, and prices for foreign have advanced 7*s*. 6*d*. to 10*s*. The supply of English (owing to sales effected so far forward) is still nominal; very high prices are asked for these sorts. There is more doing in the galvanised iron trade, also in yellow metal: prices are not, therefore, likely to recede.—**LEAD.** The supply of foreign is limited; the English makers ask 2*s*. 6*d*. advance, but buyers are not inclined to meet this advancing market.

Messrs. James and Shakespeare—**COPPER.** No sales reported in furnace material, values for which remain unaltered. The Chili telegram came to hand on Friday morning last, and advised charters of 2100 tons pure for the latter half of August, of which 1800 in bars and ingots, the remainder in ores and regulus. Although about the usual average the news had rather a depressing effect, and importers accepted as low as 77*l*. for the ordinary brands to arrive, at which figure a few spot sales like clockwork. An improved demand then set in, and a good trade has been done during the current week, resulting in a rise of about 20*s*. per ton from the lowest point, and sellers scarce at the nominal quotations. Australian sorts are being more freely taken, and some fair parcels of Wallaroo have been purchased for shipment to the North of Europe. This brand has advanced about the same as Chili bars, but prices for other makes are somewhat irregular. English participate in the general improvement, and makers are tolerably well supplied with orders.—**TIN.** English has been in rather better request, makers having accepted figures a trifle below those they were asking last week. Foreign sorts were tolerably active, and good quantities (principally Australian) have changed hands, but without causing any advance in values, as the supply has proved quite equal to the demand. The Dutch Trading Company have announced their sale for the 29th inst., and will then dispose of 22,300 slabs Banca on usual terms and conditions.—**LEAD.** Continues firm, and smelters are asking a further advance of about 2*s*. 6*d*. per ton.—**SPELTER.** It is a trifle higher in value, with a fair business doing at current rates.

Messrs. Pixley and Abell.—**GOLD.** Bargold continues to flow into the Bank, the amount so disposed of since our last circular being no less than 438,000*l*. Further sales will follow, the only demand for abroad being for French and American coin; such requirements, however, are very limited. The imports of this week comprise 22,950*l*. from New Zealand, 11,400*l*. from the Cape, 10,000*l*. from Brazil, 580,000*l*. from Australia, 80,000*l*. from New York: total, 704,350*l*.—**SILVER.** The price has slightly declined; and for the amounts received this week, 57,160*l*. of fine silver has been realised; the market is by no means firm, nearly all orders having been filled. About 53,100*l*. has been received from New York, and 29,500*l*. from the Brazils. The Boynes has taken 5400*l*. to the Brazils.

The **MINING SHARE MARKET** is without any material change, but tin mines have been a little firmer during the week, and there has been also a fair amount of business transacted in a few low-priced mines, with several enquiries for others. Those mostly dealt in have been East Lovell, Cook's Kitchen, Carn Brea, Prince of Wales, Pennerley, Kitty (St. Agnes), Wheel Grenville, Hingston Down, Van Consols, Marke Valley, Cathedral, Penstruthal, and a few others.

Carn Brea kept quiet at 54 to 56; Cook's Kitchen, 94 to 104; Dolcoath, 44 to 46; East Lovell, 11 to 12; Tincroft, 304 to 314; West Tolgus, 67½ to 70; Roman Gravel, 14 to 15; West Tankerville, 17s. 6d. to 22s. 6d.; Pennerley, 1½ to 1½; West Chiverton has improved from 2 to 2½; Wheel Grenville, 4 to 4½. Wheel Kitty (St. Agnes), 6½ to 7; at a meeting on the mine, on Wednesday (Captain Teague in the chair), the accounts showed a credit balance of 637*l*. 13*s*. 11*d*., and a profit of 536*l*. 12*s*. 8*d*. A dividend of 536*l*. 17*s*. 6*d*. (2*s*. 6*d*. per share) was declared. The agent's report, which will be found in another column, was very satisfactory. Wheel Uny, 32s. 6d. to 37s. 6d.; Devon Great Consols, ½ to 1½.

Parys Mountain, 8s. to 10s.; at the meeting the accounts, together with the directors' report (a summary of which appeared in last week's Journal), was submitted and passed. A supplementary statement showed that for the six months ending June the operations had resulted in a profit of 184*l*. 16*s*. 8*d*. At that time the agent valued the ores in reserve at 6000*l*., and although 3000*l*. worth have since been sold, the reserves have not been diminished. Since the accounts were made up ores to the value of 1417*l*. 13*s*. 10*d*. have been sold, 140 tons of copper ore sampled, and 300 tons of native ochre sold. It was explained to the meeting that, although the assets over liabilities amounted to 3018*l*., it has been the custom of the directors to pay for everything in cash monthly, while the ores raised were not in cash for two or three months afterwards, and it was necessary, therefore, to have a small cash capital in hand; and, as the preference shares had not been taken up, a special resolution was passed not to issue them until the same be directed by a further special resolution of the company, and the directors were authorised to receive applications for the 7077 shares (3*l*. paid), which will be issued at 10*s*. each, or at a discount of 2*l*. 10*s*. Under the new process for returning poor ores, arrangements are in progress which it is hoped may result in good profits to the company, and the direc-

tors are confident that if 1000*l*. or 2000*l*. be raised on the shares now authorised to be issued, good and profitable results will follow. East Van shares are rather better, at ½ to 1½. Great Laxey, 1½ to 1½; Ladywell, 2½ to 3; Penhalls, 1½ to 1½; Penstruthal, 1½ to 1½; Providence Mines, 3 to 4.

Marke Valleys have advanced to ½, 1½; the lode in the 50 west is yielding 4 tons of ore per fathom, and the rise in the back of the 10 tons per fathom for length of 15 ft. At Wheel Cuning meeting no call was made. The accounts showed a loss on four months' working of 1121*l*., and a debit balance of 2329*l*. The tin sold realised 1369*l*. The agent's report is more encouraging, and shows two or three important points in the mine to come off, and the meeting was adjourned for a month. Wheel Peavor, 2½ to 3; the lode in the principal shaft is reported worth 50*l*. per fathom. The stope in the bottom of the 48 is worth 15*l*. per fathom, stopping at 50*s*. The points valued are worth in the aggregate 75*l*. per fathom, and 11 pitches have been set to 38 men and boys, at tributes varying from 9*s*. to 12*s*. in 1*l*. About 260*l*. worth of tin was sold on Thursday. West Basset, 8 to 8½; the lode in the 144, east of shaft, is worth 12*l*. per fathom; the 134 west, 20*l*. per fathom. The total points in operation, including 22 stopes, are valued in the aggregate at 68*l*. per fathom.

Wheel Crebor, 20s. to 25s.; the lode in the bottom of the 120 is 6 ft. wide, and worth 20*l*. per fathom. Two stopes in the back of the 120 worth 15*l*. and 20*l*. each per fathom. The 48 east continues to look well. At Old Bottle Hill a new winze, 7 fms. further east than that worth 10*l*. per fathom has just been commenced in a splendid copper lode, 34 ft. wide. Prince of Wales, ½ to ½; the next sampling is expected to be the best for some time past. South Carn Brea, 2 to 2½; South Condurrow, 3 to 3½; South Crofty, 11 to 13; South Roman Gravel, 12s. 6d. to 15s.; Van, 22 to 24. Old Tanburget, ½ to ½; the sale of ore this month realised 1676*l*. 9*s*. The best parcel, 33 tons, realised 31*l*. 11*s*. per ton; 18 tons, 20*l*. 7*s*. 6*d*. per ton; and 9 tons, 18*l*. 1*s*. per ton. Alterations to the machinery have retarded operations of late, but the mine is now in full operation again. Bog, ½ to ½; the 175 has been communicated with No. 3 winze, on Whitestone lode, and the south lode intersected, which going east is worth 2 tons of lead ore per fathom, and has improved the prospects of the mine considerably. Tankerville, 7 to 8; the lode in the 152, west of shaft, is worth 6 tons of lead ore per fathom; the 140 west, 7 tons. There are 22 bargains at work, the aggregate value being 53 tons of lead, or 711*l*. per fathom. Hingston Down, 1½ to 1½, and in request, owing to an improvement in the 110; lode worth 20*l*. per fathom. Bedford United, ½ to 1; this mine is looking well. South Ward, 1 to 1½; the 60 south, on the North Hooe lode, is very promising for a course of ore. Cathedral, 22s. 6d. to 25s.; lode in shaft valued at 40*l*. per fathom. Van Consols 2½ to 2½; the lode in the bottom of the mine is of the same value as last reported, 8 tons per fathom. In our last a clerical error occurred—the lead ore sold should have been 4329*l*. 5*s*. Great West Van, 20s. to 25s., cum div.

Among Foreign shares Eberhardt and Aurora have been advanced to 5½, 6; the mine is said to be making large monthly profits, with every probability of increasing them. Birdseye Creek, 2½ to 3; Cedar Creek, 1½ to 2; Chontales, 12s. 6d. to 15s.; Emma, 1½ to 2; Flagstaff, 3½ to 3½; South Aurora, 10s. to 15s.; Sweetland Creek, 3½ to 4.

The Market for Mine Shares on the Stock Exchange during the week has largely participated in the general and marked improvement apparent in most metals, and the tendency at the close was decidedly favourable, pointing to increased values.

Home Mines have been fairly active, and a considerable amount of business has been transacted, especially in leading descriptions. American Mines have been generally flatter, and (with the exception of Flagstaff and Eberhardt shares, in which some activity has prevailed), prices are tending downward.

The Metal Market has been active, and closes firmly. Copper in good demand, with gradually hardening prices, although manufactured has been somewhat less active. Tin has maintained quotations. At the Dutch Trading Company's sale, on Sept. 29, 22,300 slabs will be offered. Tin-plates in better demand. Lead and spelter steady.

Flagstaff, 3½ to 3½; it is understood that negotiations are still in progress for the completion of the arrangements between the company and the vendor. The difficulty is known to be the objection raised by the latter to certain members of the board, on account of what passed at some of the recent meetings, but it is thought not unlikely that this point may be waived, and a definitive result announced in the course of the ensuing week. Emma shares have declined, and close 1½ to 1½; during July 2694 tons of ore were returned from the mine and concentrated from fillings, and there were sold at Salt Lake City 2934 tons, of an average value for silver of 78*s*. 0*d*. per ton; on July 31 there were on hand 204 tons. For the preceding month the quantity sold was 3654 tons, of an average value for silver of 77*s*. 0*d*. A few days since a report was attempted to be circulated that an improvement in the mine had taken place, but there is no foundation for the rumour; on the contrary, the advices are of quite a different character. Last Chance, 1½ to 1½; Tecoma, ½ to ½. Utah, ½ to ½; in another column we publish a letter from the superintendent. There does not appear to be any change at the mine. The machinery is working well, and he has a large quantity of dressed ore on hand, for which he is endeavouring to find a market.

Richmond Consolidated, 6½ to 6½.—Cablegram received: "Week's run, \$34,000; two and a quarter furnaces; still short-handed; mine looking well." We understand that the illness of the foreman and several of the men is the cause of only two furnaces being run last week. It appears from the present notice that the third is again started, but that the men have not all recovered. The gross amount of bullion made to date this season is \$735,000. Last year from Sept. 10 to end of December the return of bullion amounted to \$682,000, and as the supply of ore is abundant, and the three furnaces in order, there is every reason to expect as large a make up to the coming December. The financial year of the company closed at the end of August, and within those twelve months the shareholders have received 1*l*. 12*s*. 6*d*. per 5*l*. share in dividends.

Eberhardt and Aurora share advanced to 5½, 5½; a cablegram announces that 1010 tons of ore were crushed during August, producing 10,872*l*; average assay \$63 per ton. Unofficial advices are to the effect that the debts if not

season. This work has, however, from all we can learn, absorbed the profits from the other claims. It has been vigorously pushed on, and, when completed, will be of the utmost value to the concern. Blue Tent has commenced and almost finished a new ditch from their location on the South Yuba river to Diamond Creek, a distance of over six miles. The remaining portion will be shortly commenced, so as, if possible, to complete the entire ditch before the water season comes on again. The value of this work will be manifest in the coming year, as during the past season the company have had to buy all the water they have used. We shall refer to this subject again in our next.

Sweetland Creek, 3 to 3½; there has been a drop of nearly 20s. per share to-day, ostensibly upon receipt by the shareholders of a circular containing a letter from the superintendent. It would hardly appear, however, that the fall is justified by the information in the circular. On the contrary, the only unfavourable part of the news is that referring to the channel, and this was mentioned in the directors' report, issued in anticipation of the annual meeting, and fully discussed by the shareholders. They were told then that a rise in the bed rock had cut off the channel, and that it was probable it had been turned aside by the obstruction, and would be found again by-and-by. Mr. McLean says this remains yet to be proved. It should not be forgotten that he announced as a fact the greater richness of the side dirt, of which there is such a quantity that it will take many years to exhaust. Birdseye Creek, 2½ to 2¾; a telegram from Mr. Powers, the superintendent, this week gives the result of the month's washing as a profit of \$2000. Considering that the main channel is not yet reached, and that water has to be purchased, this return is not bad. Blue Tent, 5 to 5½; the washing here will shortly be discontinued for the winter. Before the bad weather sets in, however, the company's ditch will be half-completed. Cedar Creek, 1½ to 1¾; washing is going on through the new tunnel on the Yankee claim, and the superintendent anticipates good results.

Colorado Terrible, 3½ to 3¾; the concentration works are a perfect success. The shipments to Liverpool are a proof of this. Three have already arrived since the running of the works, and four more are advised as en route up to the end of August. These, taken together, represent a sum of nearly 7000£. When this is realised the shares cannot fail to improve. The mining accounts for June are to hand, and show a profit for the month of 100£. That the vein is continuous and improving in depth there is no question, as the seventh level is now in working, and the lode at that point is the best that has yet been met with.

New Pacific, ¾ to 1; Mr. Pringle writes in a very cheering manner, having just cut into a good body of ore. Where intersected it is of very low quality, base ore, but he is of opinion that on development a change for the better will take place. At Mineral Hill prospecting progresses without any change to notice; the mines continue to look well, and turning out a good quantity of ore. The raisings during the week ending Aug. 17 amounted to 80 tons, of an average grade of \$66 per ton, raised at a cost of \$1000, including prospecting, &c.

Van, 22 to 25; the workings here are continuing much as usual. The 75 west is opening up well, and other parts of the mine remain without change. The sale this month will be of an increased quantity. Van Consols, 2½ to 2¾; shares very scarce. The lode in the bottom of the mine is without change. The first monthly report will be made next week. We hear that arrangements are being made for working the eastern ground, which will have a most beneficial effect on the price of these shares. Bog, ½ to ¾; a general meeting has been called to take into consideration the position of the company. The agents report the mine as somewhat improved. It would seem to be a great mistake to stop the mine just as the point to get at which so much money has been expended has been reached. We understand that the mine has been most favourably reported on by an eminent authority in the district. Pennerley, 1½ to 1¾; the agents report the mine as without change.

Great Wheel Vor, 1½ to 2; the report of the quarterly meeting will be found in another column. The company is in a sound financial position, having 1263£ in hand, after paying all liabilities, on the day of meeting, besides some 400£ materials now to dispose of, and three engines, with their boilers attached, none of which are required for the future working of the mine. The manager reported that the water was fast rising in the suspended part, and he hoped they would soon have a supply to enable them to begin dressing the large accumulation of slimes, &c., on the old floors, from which regular monthly sales can be made. The committee stated in their report that the work now carried on at the mines was estimated to cost less than 200£ per month. Penstruthal, 1½ to 1¾; mine opening out satisfactorily. The general meeting will be called shortly, when it is stated a highly satisfactory statement will be submitted.

Subjoined are the closing quotations:—
Bog, ¾ to 1; Carn Brea, 54 to 56; Devon Great Consols, ¾ to 1¼; Dolcoath, 46 to 48; East Canadian, 1 to 1¼; East Lothian, 10½ to 11½; Great Laxey, 11 to 12; Hingston Down, 1 to 1¼; Marke Valley, ¾ to 1½; Penar, 1½ to 1¾; Perkins Beach, ¾ to 1; Parys Mountain, ¾ to 1; Penstruthal, 1½ to 1¾; Roman Graves, 14 to 14½; South Condurrow, 3½ to 4; Tincroft, 20½ to 21½; Tankerville, 7 to 7½; Van, 22 to 25; Van Consols, 2½ to 2¾; West Bassett, 8 to 9; West Chilverton, 1½ to 2½; Wheel Grenville, 4 to 4½; Birdseye Creek, 2½ to 2¾; Cedar Creek, 1½ to 1¾; Cape Cropper, 28 to 29; Colorado Terrible, 3½ to 3¾; Chontales, ¾ to 1; Don Pedro, ¾ to 1½ dis.; Eberhardt, 10 to 11; Aurora, 5½ to 6½; Emma, 1½ to 1¾; Flagstaff, ¾ to 1; Frontino and Bolivia, 1 to 1½; Independence, 2½ to 2¾; Last Chance, 1½ to 1¾; Malpas, ¾ to 1; Malabar, ¾ to 1; New Pacific, ¾ to 1; New Quebrada, ¾ to 1; Port Phillip, ¾ to 1; Rica, ¾ to 1; Richmond Consolidated, 6½ to 6¾; Sweetland Creek, 3 to 3½; Utah, ¾ to 1; United Mexican, ¾ to 1; Sierra Buttes, 2½ to 2¾; ditto new, 1872, 1¼ to 1½; Blue Tent, 5 to 5½; Holcombe Valley, 1 to 1½; New Pacific, 7s. 6d. to 10s.; West Esgrair Le, 2½ to 2¾; New Zealand Kapanga, ¾ to 1.

COLLIERIES AND IRON COMPANIES.—A fair amount of business has been transacted during the week, chiefly in the following:—Thorp's Gawber Hall, Bilson and Crump, Welsh Freehold, Cleve Hill, Chapel House, Sheepbridge, Ebbw Vale, Bolewog Vaughan, West Cumberland, New Sharlstone, and one or two others. The transfer books of Phoenix Bessemer Steel are now closed until the 18th inst., preparatory to the meeting; the shares are quoted 25 to 27½. The cheapest share now in the market is undoubtedly Thorp's Gawber Hall, which can still be purchased to pay 25 per cent. The investor purchasing (say) into Sheepbridge Coal (which has just paid 22½ per cent. as against the 40 per cent. of Thorp's Gawber Hall) has to pay 50 per cent. premium, while the shares of Staveley Coal, another high paying dividend concern, stand in the market at 112 (60¢ paid). Some enquiry has prevailed for Distock Colliery shares (10¢ paid); as stated last week, the dividend is at the rate of 16 per cent. Leigh and Wilkes Coal, 90 to 92; advice just received state that, although on several occasions the men only worked half time, the total shipments for the half-year ending June 30 amounted to 1,060,943 tons, as against 562,840 tons for the corresponding six months. The shipments during August were 562,840 tons; those for July are not stated. Thorp's Gawber Hall, 15½ to 16½; Bilson and Crump, 7½ to 8½; Welsh Freehold, 3 to 3½; Cleve Hill, 8s. to 10s. At the meeting, on Wednesday, of the Canal Street Ironworks Company, the accounts for the year showed an available balance of 30,007£, out of which a dividend of 5 per cent. was declared; the sum of 500£ was set aside to form the nucleus of a depreciation fund, and 1697£ was carried forward. West Cumberland Iron and Steel (13½ to 14½), and Lydney and Wigpool (2½, 1½ dis.), have met with some enquiry, though there is no appreciable alteration in the quotations. Bolewog Vaughan, 22 to 22½ prem.; ditto B, 11 to 11½ prem.; the Five per Cent. Preference remain stationary at par. Charles Cammell, 73 to 75; John Brown, 77½ to 80. One or two transactions have been recorded in Palmer's Shipbuilding and Iron at 8½ dis.; Pelaw Coal, 12 to 14; Ebbw Vale, 28 to 29; Chapel House, 4 to 4½; Cardiff and Swansea, 3½ to 3¾; New Sharlstone, 9 to 10; United Bituminous, 12s. 6d. to 15s.; H. Briggs' Colliery, 26 to 27; Merry and Cunningham, 3½ to 3¾. The shares of Wernipitill Colliery, and of Brynoll Colliery are unsaleable on the market. On Monday last at an extraordinary meeting of the Llangeoch Colliery, special resolutions were passed authorising the issue of 2000 of the unused 10s. shares, on which it is proposed to call 1½. The confirmatory meeting will be held on the 21st instant. The output at present is about 200 tons per day. An extraordinary general meeting was held on Wednesday of the Gauley Kanawha Coal Company, when resolutions were passed to alter the Articles of Association, and to authorise the directors to increase the capital by the issue of 4000 additional preference shares. The general prospects continue very satisfactory; houses and workshops have been erected, and the whole work so far advanced that coals is expected to be sent to the markets about the middle of next month. Stimulated by the hope that something after all will come from the vendor, Nant-y-Glo and Blaenau are now as good as 50 to 55. West Mostyn 12 per cent. preference 2½, paid, ½ to 1½; Cardiff and Swansea, 3½ to 3¾; Newport Abercrombie, ½ to ¾ dis.; Coal and Iron Company have declared a dividend of 10 per cent., carrying over a balance of 1294£, 15s.

The LLWYN TREFY LEAD MINING COMPANY, with a capital of 15,000£, in shares of 1£ each, has been formed to purchase and work an extensive mineral property of the same name, 14 miles from Aberystwyth. The sett contains several large and powerful lodes, one of which, known as the Bwlch Gwyn South Lode, has been

worked upon and proved down to 50 fathoms, at which depth fine courses of rich lead ore have been discovered, and are ready to be taken away at a very small cost, and from which a parcel of 10 tons has been dressed and sold. This lode has produced many thousands tons of lead ore in the adjoining mines, where it is found to be richer in the bottom, or 83 ft. level, than a'ove, thereby showing that it improves in depth, and promises well for the future of this company, more particularly as this lode at which point great deposits of lead ore may confidently be expected. The other lode, which is known as Pryce's lode, has been proved for a short distance by an adit level and by a sink below the level, in both of which good course of lead ore are found, and from which a splendid pile is now to be seen at the surface. The lode is of the most promising character, and is well situated for laying on large bodies of ore ground, as by extending the level into the hill a back of 100 ft. in height will be obtained for above a mile in length. The property has been carefully inspected and reported upon by Capt. Thomas Kemp, Abolom Frances, and Thomas Pryce, who concur in predicting that with judicious management it will prove a great success. The prospectus will be found in another column.

The Phoenix Bessemer Steel Company's (Limited) annual report has been issued. The directors have been compelled, in consequence of the decreased demand for Bessemer ingots, to increase the plant, in order to work the material into a finished state. The contracts taken over from the vendors have fallen 25 per cent. short of the sum of 8355£, at which they were estimated in last balance-sheet. Bringing forward the profit on last year's account of the sum of 6681£, after allowing interest on loans, bad debts, and over estimation of vendors' contract, the shareholders will have a credit balance of 9292£ to deal with when they meet.

Erie Second Consolidated Mortgage Bonds were dealt in at 64½, 64½, and leave off steady at 64½ to 65½.

CHEMICALS AND MINERALS.—(Messrs. J. Berger Spence and Co., Manchester, Sept. 9).—Soda: Cream caustic, 60 per cent., 13½ to 14½; white, 15½ to 16½; soda ash, 2½ d. to 2½ d.; soda crystals, 5½ to 6½; bi-carbonate, 16½; salt cake, 3½ to 4½; Glauber salts, 2½ to 3½; Bleaching Powder: At 8½ to 10½; Alum: 8½ for loose lump; ground, 8½; Nitrate of Soda: At 11s. 6d. to 12s.; Ammonia: Sulphate, white and grey, 17½ to 18½; carbonate, 7½ d. to 8½ d.; muriate, 30½ to 35½; sal ammoniac, 1st, 45s.; 2nd, 44s.; Potash: Muriate, 80 per cent., 6½ to 10s.; 6½ to 12s. 6d.; f.o.b.; Prussiate, red, 2s. 6d.; yellow, 13d.; chlorate, 11d.; bi-chrome, 6½ d.; Iron Salts: Green and rusty coppers, 60s. to 65s.; dry coppers, 55s.; Copper Salts: Sulphate of copper, 27½; Salt-petre: Foreign, 20s. to 22s.; refined, 26s. to 27s.; Acid: Tartaric, English, at 1s. 7½ d.; foreign, 1s. 7d.; oxalic, 7½ d.; sulphuric, 3½ to 4s. 10s.; carbolic, No. 1, 11d. to 1s.; Arsenic: 10½ for white powdered; Magnesia: Epsom salts, 4½ to 5½; refined, 4½ to 10s.; Pitch: 32s. to 35s.; Benzole: 30 per cent., 2s. 9d.; 50 per cent., 3s. to 3s. 3d.; 90 per cent., 4s. to 4s. 6d.; Borax: Refined, 67s. 6d.; Wood Pulp: Labro moist, 5½ to 10s. per ton at output; Brimstone: Best thirds, 7s. 2d.; Phosphate of Alumina, 3½ to 3½ to 10s. per ton; Pyrites: Spanish cupreous, 8½ d.; non-cupreous, 9d. to 9½ d.; China-clay: 18s. f.o.b. Cornwall; Phosphates: High strength, 80 to 85 per cent., 1s. 4d. to 1s. 5d. per unit; Estramadura, 1s. 3d.; ordinary, 60 per cent., 1s.; precipitated phosphate of lime, 70 per cent., 5½ to 5s.; super-phosphates, 80 per cent., soluble, 3s. 6d. per unit; 25 to 26 per cent., 3½ to 10s.; Manganese: Ores, 115s. for 70 per cent.—Iron Ore: Hematite, 16s. to 22s. 6d.; puddling, 24s. to 27s.; oolitic, 8s. to 10s.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Aug. 29	Park	20	£13 0 0	Adam Eytton.
Sept. 1	Rhoswyddol	20	11 18 0	Walker, Parker, and Co.
9	Great Laxey	100	22 0 0	Treffry's Estate.
10	Talargoch	70	13 15 0	Walker, Parker, and Co.
	North Hendre	50	13 15 0	ditto
	ditto	10	14 16 0	Adam Eytton.
	Prince Patrick	40	13 16 0	ditto
	So. Prince Patrick	40	13 16 0	ditto
	Foxdale	100	21 12 0	Burry Port Smelting Co.
	Roman Gravel	100	13 11 0	Walker, Parker, and Co.
	ditto	25	13 11 0	Nevill, Druce, and Co.
	ditto	25	13 11 0	Panther Lead Company.
	ditto	50	13 14 0	George Burr.
	ditto	30	13 12 0	ditto
	Bwardrain Consols	20	12 7 0	Nevill, Druce, and Co.
11	Old Treburget	33	31 11 0	Treffry's Estate.
	ditto	18	26 7 0	Nevill, Druce, and Co.
	ditto	9	18 1 0	Treffry's Estate.

BLACK TIN.				
Date.	Mines.	Tons. c. q. lb.	Price per ton.	Amount.
Aug. 27	Rosewall Hill	14 0 1 10	£55 5 0	£ 774 8 9
Sept. 5	Wheal Ury	13 0 0 24	52 0 0	694 17 0
7	Ped-an-drea	17 4 2 5	55 15 0	960 9 10
9	Penhalls	7 6 2 6	55 12 0	407 12 0
	Wheal Coates	1 17 1 25	50 12 6	94 17 0

COPPER ORES.				
Date.	Mine.	Tons. c. q. lb.	Price per ton.	Purchaser.
Aug. 13	Caldbeck Fells	14 8 3 0	£19 15 6	John Bibby, Sons, & Co.
	ditto	13 3 0 0	7 8 6	ditto

COAL MINES REGULATION ACT, 1872.

APPROACHING EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF RALPH MOORE, Esq.,
H.M. INSPECTOR OF MINES.

PERSONS desirous of being EXAMINED in this district for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, should at once communicate with the Secretary to the Board of the above mentioned District, at the following address.

By order of the Board,
R. CALDER, Secretary,
206, Renfrew-street, Glasgow.

FOR the DRAINING of an EXCELLENT and very favourably situated MINE of COALS (Braunkohle), in BOHEMIA, a TECHNICAL MINING OFFICER is looking for ONE or SEVERAL ASSOCIATES, he himself engaging in the undertaking, and offering guarantee. Address offers to Mr. CHRISTOPH HIRSCHBERGER, Merchant, in Teplitz, in Bohemia, who will give all requisite information.

MANAGER.
THE GOVERNOR AND COMPANY OF COPPER MINES IN ENGLAND REQUIRE a GENTLEMAN of practical experience to UNDERTAKE the MANAGEMENT of their WORKS, at CWM AVON, GLAMORGANSHIRE, producing coal, copper, iron, and tin-plates. Application, with references, to be made to the Company, at their offices, No. 27, Martin's-lane, Cannon-street, London, where further particulars can be obtained.

HEMATITE IRON ORE ROYALTY, CUMBERLAND.
AN OPPORTUNITY NOW OCCURS FOR ONE OR TWO GENTLEMEN BECOMING INTERESTED IN A MOST VALUABLE ROYALTY, of considerable extent, of high promise, and of ultimate great commercial value, as PATENTERS with present holder of the royalty. Full particulars given to real bona fide applicants, but not otherwise. Apply to "Miner," MINING JOURNAL Office, 26, Fleet-street, London.

FOR SALE, ELEVEN BOUND VOLUMES of the "MINING JOURNAL," from the year 1835 to 1841. Address, "T. V.," 9, Gracechurch-street, E.C.

FOR SALE, a VALUABLE OPENED COLLIERY PROPERTY, in the neighbourhood of NEATH. For terms and particulars, apply to Messrs. DOBSON, BROWN, and ADAMS, Guildhall Chambers, Cardiff.

IRON MINE.
FOR SALE, a SHARE in an IRON MINE, in full working order, situated in the FURNESS DISTRICT. Address, Mr. J. A. ANDERSON, 33, Storey-square, Barrow-in-Furness.

FOR SALE, an EXCELLENT 30-in. cylinder ROTARY ENGINE. For particulars, apply to JOHN R. DANIELL, Solicitor, Camborne.

FOR SALE, a HORIZONTAL HIGH-PRESSURE ENGINE, 13½ in. cylinder, 24 in. stroke; HORIZONTAL HIGH-PRESSURE ENGINE, 14 in. cylinder, 30 in. stroke; and a PAIR of GUN-METAL PUMPS, 6 in. diameter, 12 in. stroke; also, a TUBULAR BOILER, up to 60-horse power, of Yorkshire plate, throughout. Apply to W. T. HENDRY and Co., 2, Wilson street, London E.C.

TO BE SOLD CHEAP, a FIRST-RATE SECOND-HAND 12-horse power WINDING ENGINE, with self-propelling apparatus attached, for removing from place to place. For particulars and prices, apply to ROBEY and COMPANY (Limited), Engineers, Lincoln, England.

BARYTES (SULPHATE OF), CRUDE OR GROUND, FOR SALE. Apply to FORCE CRAG LEAD AND BARYTES MINING COMPANY, 69, Close, Newcastle-on-Tyne.

GOBBETT TIN MINE, DARTMOOR.
ONE THOUSAND fully paid-up 1£ SHARES FOR SALE, at 25s. a share. Early application is requested. £500 TEN PER CENT. DEBENTURES FOR SALE, at par—cum dividend, £25. Apply to Mr. R. TREDINICK, Consulting Mining Engineer, 43, Bishopsgate-street, E.C.

MR. R. PERCY ROBERTS
FINANCIAL AGENT,
40, ENGLISH STREET, CARLISLE.

ORES, &c.

I BUY at the highest prices:—
LEAD ORES.—LEAD-SILVER ORES.—SILVER-LEAD ORES.
SILVER-LEAD.—HARD LEAD.—ANTIMONIAL LEAD.
GOLD AND SILVER ORES.
ZINC AND LEAD ORES MIXED TOGETHER.

Particulars by letter. ARMAND FALLIZE, Ingénieur, à Liège (Belgium)

F. RODY, COLOGNE, GERMANY,
GENERAL METAL MERCHANT,
EXPORTER OF SPECTER, SHEET ZINC, NICKEL, COBALT, and all
NEW AND OLD METALS in general; MINERAL ORES, &c.

MINES.

MR. F. O. NEILSON, ALGIERS, ALGERIA, gives his special attention to BUYING and SELLING MINERAL ORES, and to NEGOTIATING the PURCHASE, HIRE, or CAPITAL NECESSARY for WORKING the MINES in this COLONY. At the present moment he has hand MINES of ZINC, LEAD, IRON, COPPER, &c.
Persons interested in such business are invited to address themselves to Mr NEILSON, as above.

PATENT RIGHT FOR GREAT BRITAIN FOR SALE.
CAZIN'S COMBINATION ORE-SIZER AND CONCENTRATOR ONE-PLUNGER SYSTEM.
In ONE machine—a complete system of ore concentration, when added to a battery of stamps.

Covered by Letters Patent of July 2nd, 1872, and recent application. This machine contains a sizing apparatus (revolving screen), delivering four sizes of ore to four rows of sieves, each row concentrating according to specific gravity—the sized ore furnished by the sizer. Each row contains five sieves, and to end, on which the ore is submitted to the concentrating action long enough to prevent loss of valuable parts. The machine, continuously fed, works second and third-class ore into first-class ore, of perfect cleanliness, in automatic action, and simultaneously in four grades or sizes. It thoroughly separates all materials differing in specific gravity. Added to a battery of stamps, this machine constitutes a complete system of ore concentration sufficient for the requirements of most Western mines, with a capacity of 12 to 15 tons per 24 hours, costing less in construction than any other contrivance in the market.

For particulars, apply to F. M. F. CAZIN, M. and C.E., at Denver, Colorado, 243, Sixteenth street, Lock box 225.

SALT LAKE CITY, UTAH TERRITORY, U.S. AMERICA.

WILLIAM BREDEMEYER,
MINING AND CONSULTING ENGINEER,
U.S. MINERAL SURVEYOR.
Particular attention paid to Underground Surveys.
OFFICE.—KIMBALL BLOCK, SALT LAKE CITY.

D. ERNEST MELLISS, A.M., Ph.D.,
MINING ENGINEER AND GEOLOGIST,
52, BROADWAY, NEW YORK, UNITED STATES.
EXAMINES and REPORTS upon MINERAL and other LANDS, MINES, ORE BEDS, &c., either in or out of the United States.

Information furnished in regard to any of the American Mining Districts. Dr. MELLISS has had special experience in the Silver and Gold Mines west of the Rocky Mountains, and in the Coal and Iron Region of the Southern States.

Refers by permission to—W. BUTLER DUNCAN, Esq. (Duncan, Sherman, and Co.), New York; L. P. MORTON, Esq. (Morton, Bliss, and Co.), New York; MARK BRUNAGIN, Esq., President Mariposa Mining Company; JAMES B. HODGKIN, Esq., Pres. U. S. Rolling Stock Company; CHARLES A. JOY, Ph.D., Prof. Chemistry, School of Mines, New York; FRIEDRICH WÖHLER, Ph.D., Prof. Chemistry, Univ. Göttingen; SARTORIUS V. WALTERSHAUSEN, Prof. Geol. and Min. Univ. Göttingen; WALTER WILLIAMS, Esq., Creswell Hall, Stafford, England; JOHN J. CISCO, Esq. (John J. Cisco and Son), New York; S. L. M. BARLOW, Esq., New York; C. P. HUNTINGTON, Esq., Pres. Chesapeake and Ohio Railway; CHARLES F. CHANDLER, Ph.D., Pres. New York Board of Health; J. A. NEWBERRY, M.D., Prof. Geology School of Mines, New York; RUDOLF FITTIG, Ph.D., Prof. Chemistry Univ. Tübingen, Wurtemberg.

CAPPER PASS AND SON, BRISTOL,
ARE PURCHASERS OF

ANTIMONIAL or HARD LEAD, LEAD MATTE, LEAD SLAGS, LEAD ASHES, SULPHATE OF LEAD, COPPER SLAGS, COPPER REGULUS or MATTE, TIN ASHES, and TIN SCRUFF.
MIXED METALS and DROSS, containing LEAD, COPPER, TIN, or ANTIMONY.

TYNE CAST MALLEABLE IRON COMPANY,
WORKS: TEAMS, GATESHEAD;
LONDON OFFICES: CHANDOS CHAMBERS, ADELPHI, W.C.
MANUFACTURERS OF ALL DESCRIPTIONS OF
MALLEABLE IRON CASTINGS, delivered in London, carriage free.

In Chancery.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and in the MATTER of the GENERAL BRAZILIAN MINING COMPANY (LIMITED).—THE CREDITORS of the ABOVE-NAMED COMPANY resident within the United Kingdom of Great Britain and Ireland are REQUIRED, on or before the 30th day of September, 1874, to SEND their NAMES and ADDRESSES, and the PARTICULARS of their DEBTS or CLAIMS, and the NAMES and ADDRESSES of their SOLICITORS (if any), to the Liquidators of the said company, at their office, situate at 56, London Wall, in the City of London; and, if so required by notice in writing from the said liquidators, are, by their solicitors, to COME IN and PROVE their said DEBTS or CLAIMS, at the Chambers of the Vice-Chancellor, Sir RICHARD MALINS, situate at No. 3, Stone Buildings, Lincoln's Inn, in the county of Middlesex, at such time as shall be specified in such notice, or in default thereof they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such debts are proved. Wednesday, the 4th day of November, 1874, at Twelve o'clock at noon, at the said Chambers, is appointed for hearing and adjudicating upon the debts and Claims.

W. WALKER, Chief Clerk.
WILKINS and BLYTH, 10, St. Swithin's-lane, E.C.
(Solicitors for the said Liquidators).

Dated this 13th day of July, 1874.

WANTED TO PURCHASE, a PYRITES MINE, capable of producing a minimum of FIVE THOUSAND TONS per annum, of 40 per cent. and upwards of SULPHUR, with or without copper.

Address, "Pyrites Mine," MINING JOURNAL Office, 26, Fleet-street, E.C.

£1000.

TO BE SOLD, to REALISE an ADVANCE, TEN £100 warrants (coupons attached) in a FOREIGN WATER WORKS in FULL OPERATION. Large dividends may be relied upon to an immediate purchaser; low price will be taken, as must be sold.

For particulars, apply to Mr. THOS. SPARGO, 2, Queen's Buildings, Queen Victoria-street, E.C.

NANT-Y-RONEN CONSOLS SILVER-LEAD MINING COMPANY (LIMITED).
This mine being situated in one of the best districts in Wales is likely, with the capital and energy of the parties connected with it, to prove a great success. The FIRST GENERAL MEETING of the company will be HELD at the Freemason's Tavern, London, on the 14th inst., at Six o'clock, P.M., in pursuance with the Articles of Association, when a full report from the manager will be produced.

LABORATORY AND ASSAY OFFICE,
25, FINSBURY PLACE, E.C.
For the CONVENIENCE of PARTIES having CITY ENGAGEMENTS, Mr WHITE is about to ESTABLISH EVENING CLASSES, commencing at 1x P.M. Terms on enquiry as above.

MESSRS. CAMERON AND CO., FINANCIAL AGENT
AND SHARE BROKERS,
BRIDGE STREET CHAMBERS, CHESTER.

EMERY WHEELS and GRINDING MACHINERY.—The features of novelty in the invention of Mr. CHARLES HEATON, of New York, U.S., consist in a device applicable to emery wheels or grindstones, which enables them to be run safely at extraordinary high speed, and counteracts the tendency to burst from or by centrifugal force; and while it enables the emery wheel or stone to be thus run, also prevents its wearing out of truth or round; counteracts the tendency to jump or run irregularly now existing; and while it permits the wheel or stone to grind or cut the material acted upon and to wear away in so doing, it yet enables the same surface-speed to be maintained until the stone or wheel is worn out. It further consists in a device by means of which drills, chisels, or other tools may be accurately ground to the shape or angle desired; and in certain automatic mechanism which allows the tool to be ground to be applied to the wheel or stone, either moving towards the work or from it, as desired. It further consists in a device or mechanical arrangement which enables large wheels or grindstones to be easily and practically removed, renewed, or renewed when worn out. The device is applicable to emery grinding machinery as now made, and may be applied to emery wheels or grindstones as now made or produced.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

MANUFACTURE OF ORE DRESSING MACHINERY.—"C. E. B." (Darlington).—You are quite correct in supposing that Mr. John Walker, of James-street, Old-street, manufacturer of ore-dressing and other mining machinery, is the same engineer as for many years carried on the same business in Cowper-street, City-road. The two places are not 100 yards apart. It is probably 15 years since we referred to a new lead stamping apparatus with diagonal bed.

SYNTHETIC DIVISION.—Permit me to inform "Mathesis," in reply to his enquiry in last week's Journal, that "The Synthetic Division in Arithmetic," by George Siffert, M.A., was published in pamphlet form, at 1s. 6d., in 1863, by Messrs. Macmillan and Co., of Cambridge. It has been said by competent judges to be a very valuable contribution to mathematical science, so that it is surprising it has not obtained more prominent notice.—A. L.: Belstone.

INDICATOR DIAGRAMS.—Is there any cheap book published explaining how to interpret indicator diagrams? I have frequently been shown diagrams in proof of the excellence of the engines from which they were taken, yet these differ so widely that to me they proved nothing. I think if engine manufacturers submit indicator diagrams to non-practical men, and do not wish to deceive the purchaser, they should give some popular description of the method of making the comparison. When it is a question of sending machinery to the other side of the globe, the purchase cannot be left to the manager, and London boards are nearly helpless.—DIRECTOR.

THE TWENTY-FIVE LARGEST CITIES IN THE WORLD.—A report from the Bureau of Statistics, Washington, gives an account of the population of the various countries of the world. Among other details it gives the following as the population of the 25 largest cities in the world:—London, 3,254,260; Antanan (China), 2,000,000; Paris, 1,851,792; Tschentschaw-fu, 1,600,000; Pekin, 1,300,000; Canton, 1,000,000; New York, 942,292; Tien-tsin, 900,000; Vienna, 834,284; Berlin, 826,341; Hankau, 800,000; Tschingtu-fu, 800,000; Calcutta, 794,645; Tokio (Yedo), 674,477; Philadelphia, 674,022; St. Petersburg, 667,963; Bombay, 644,405; Moscow, 611,970; Constantinople, 600,000; Liverpool, 493,405; Rio de Janeiro, 420,000.

SCALE FOR ADVERTISEMENTS.—Our charge for general advertisements is—for six lines and under, 4s.; per line afterwards, 8d. Average, 12 words per line.

THE SUPPLEMENTARY SHEET.—We have received occasional complaints, and of late a good many, that the Journal is delivered by country booksellers without the Supplement. Subscribers would oblige us by demanding that the paper should be handed to them complete, as every Journal is accompanied by the Supplement when it leaves our office, and the fault of omission must rest with the country bookseller or their London agent.

Received.—"T. L."—"Gas."—"H. W."—"Inventor."—"W. D."—"J. S."—"C. R."—"Shareholder" (Nant-y-Glo and Blaenau).—"J. M."—"Manager." Write to Messrs. Pigott and Farrar, Barnsley—"G. N." Next week—"Inventor."

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, SEPTEMBER 12, 1874.

THE IRON AND STEEL INSTITUTE.

The sixth annual gathering of members, just brought to a close, has been one of the most successful and interesting yet held. That the meeting should have been at Barrow was what might have been expected, for that place is now the largest producer of Bessemer steel in the world, besides which it can claim to have been an iron-producing district since 1710. In that year the Backbarrow furnace was built by the MACHILLS, whilst in 1747 the Newland furnace was erected by RICHARD FORD, whose monument is now to be seen in the parish church of Ulverston. A few years later the Doddington furnace and that at Bonaw were built by the LATHAMS, of Broughton. All these furnaces were worked with charcoal, for coal at that time was all but unknown in the district, especially for smelting purposes, whilst the steam-engine for blowing only superseded the old bellows at Backbarrow in 1818. In the earlier date to which we have alluded the make of pigs was only about 14 tons a week, so far as the district was concerned, but in 1740 the entire produce of the kingdom was only about 17,300 tons. Now Lancashire turns out no less than 550,000 tons a-year, the greater part of which is sent from the Furness district. From it, too, is raised the fine hematite ore, so valuable for the making of Bessemer steel, and of which 849,958 tons were raised in 1872. Of Bessemer steel some idea of what is made may be gathered from the fact that the Barrow Hematite Company, of which the Duke of DEVONSHIRE is the chairman, have now no less than 18 6-ton converters, fully one-sixth of the entire number at work in the kingdom. Mr. I. LOWTHIAN BELL, who presided with his usual ability, is second to none of our ironmasters for his knowledge of all that relates to the manufacture of iron, and is connected with works that produce upwards of 200,000 tons of pig a-year. By great perseverance he has been the leading man in economising the consumption of coal in the smelting of ironstone, so that at the present time in his own locality only from 41 to 45 cwts. of coal are now required in making a ton of iron, whereas but a few years ago the quantity was 70 cwts. Having said so much as to the preliminary business, a brief *resumé* of some of the proceedings may not be uninteresting.

Not the least valuable of the papers read was that by Mr. BROGDEN, M.P., on the explorations for coal at Barrow. The prospects of the Rampside boring are certainly most promising, and we believe that coal will ultimately be found extending over a considerable portion of North Lancashire. The matter was at one time taken up by a number of the leading landed proprietors in the Fylde district, and less than two years ago we were present at a meeting they held at Preston, which was presided over by Lord WINNERLEIGH (then Colonel WILSON-PATTEN), when a proposal made by Mr. YOUNG (a well-known geologist and mining engineer, of Sheffield) to bore for coal at no great distance from Preston was favourably entertained. For some reason or other, however, the idea was not carried out. But the success of the Rampside boring cannot fail to lead to coal being sought for in other parts of North Lancashire. Mr. BINNEY, of Manchester (the greatest authority we have on the geology of Lancashire), rather favours the idea as to coal being found extending over a considerable portion of the northern part of the county. The paper "On the Geology of the North Lancashire and Cumberland Iron Ore Districts" was also interesting, as showing the position of the valuable ores in those counties. Mr. C. SMITH, in his paper "On the Iron Ores of Sweden," gave a better idea than is generally entertained of the hematites of that country. At the same time, we think that a good deal of information with respect to some of our ironstone districts might have been brought forward as a valuable contribution to our existing knowledge of English ores. For instance, Northamptonshire comparatively unknown, now stands second to Cleveland alone with respect to production in England, yet one hears but little about it. Lincolnshire, too, is yearly increasing its produce, the fields of ore extending over a vast area of ground, but it appears to be almost isolated, and scarcely ever thought about or mentioned, yet with the prospect of coal being found in the county it is just probable that it will become a powerful rival to Cleveland. Although the most recently discovered of our mineral districts, it is now raising upwards of 400,000 tons of ironstone a-year, whilst one firm alone—the Messrs. DAWES—have no less than seven furnaces at Frodingham, midway between Doncaster and Grimsby, whilst other firms have two or three each in the same locality. As might be expected, the importance of hydraulic machinery in our iron and steel works, particularly as relates to the distributing valves or cocks, was not overlooked, and a very interesting paper on the subject was read.

Here again we may say that in connection with hydraulics we should have liked to have seen a paper on the present state of air-compressing machinery, a power that is now growing into very great importance, more particularly with respect to coal mining. Not only in Yorkshire, but in other parts of the kingdom, air-compressing engines are fast being adopted, and bid fair to be all but generally used in coal and ironstone mines. Machinery for economically and rapidly cutting minerals of every description, we think, might not have been left out of the programme, and it is to be hoped will receive some attention at the next meeting, as well as the new mode of re-carbonising burnt steel, and to which we recently drew attention. The latter cannot be over-estimated in value, seeing that steel, when burnt and made up, is of but little

value afterwards; whilst by the new process it can be made as good as in the first instance. The remarks we have thus made are entirely suggestive, but may be the means of some of those persons who are interested in the iron districts to which we have alluded, as well as patentees of machinery, in taking part in the proceedings next year.

Not the least important announcement made was that of the Chairman—that he proposed visiting America, for the purpose of seeing how England was to maintain its position as the great centre of the iron trade against the growing power of the United States. We need scarcely say, in wishing Mr. BELL a safe return home, that we shall look forward with no little interest to his report, in the interest of our English ironmasters as opposed to our American competitors. We may, however, assume that he will find the question of the production of iron intimately associated with the price of coal.

THE INCE HALL COLLIERY EXPLOSION.

The Coroner's enquiry as to the explosion of fire-damp which took place on July 18 last at the Saw Mill Pit of the Ince Hall Coal and Cannel Company, near Wigan, and which resulted in the deaths of fifteen persons, closed on Wednesday. On that day evidence was given by Mr. GEORGE GILROY (the managing director of the company), and Mr. WILLIAM PICKARD (the miners' agent for the district), and Mr. THOMAS BELL (Government Inspector of Mines). The evidence was remarkably unanimous, and its substance was embodied in the verdict of the jury, which was to the effect that, in their opinion, the explosion had been caused through CROMPTON (deceased)—the shot-lighter in the mine—having failed to examine one of the places; his attention had been called by the underlooker (BATEY) to the fact that gas existed in a working place, and the evidence that this gas had been the cause of the disaster was conclusive.

Very few colliery explosion inquiries have accounted so completely for the disasters to which they related, and to the colliery owners of the district it will come home with terrible force. CROMPTON was a man in whom the management had implicit reliance; he was entrusted with the most dangerous work in the pit—the firing of shots after the majority of the workmen had ceased their day's labour; his assistants were picked men; he was, in fact, the main link in the chain which Mr. GILROY had so carefully prepared with a view to securing the complete safety of his workmen. The mine was known to be treacherous; scores of lives had been lost in it at other collieries; working it safely was of far more importance to the company than any amount of outlay; every appliance which the managing director's experience—unsurpassed in coal mining—could devise had been brought into use; the bratticing was of iron; even the method of fixing it had been the result of patient investigation and much experiment; in case of fire the waters of the canal overhead could have been turned into the mine at a few moments' notice; and, notwithstanding all this, an explosion occurs, and 15 men are killed. It is enough to make the boldest and most enterprising miner shudder to think that, after every precaution, the only portion of his machinery that has intelligence, and is not supposed to act automatically, is the one to break down in an emergency.

The jury appended to their verdict a censure upon BATEY, the underlooker, for failing to give some information in the earlier sittings, and he was admonished by the coroner. BATEY declared, however, that he had no intention to conceal anything from the Court, and the general opinion formed from the way in which he gave his evidence was that he had been guilty of an oversight rather than of any deliberate intention to deceive.

To the company, and especially to Mr. GILROY, the jury were highly complimentary, expressing through their foreman the opinion that neither skill nor expenditure would be spared in the working of their mines.

The enquiry itself presented a remarkable contrast to that recently held at Dukinfield—in constitution, in procedure, and in results. Not having to comply with any sensational appeal from Mr. MACDONALD, the Home Secretary did not think it necessary to hamper the Court with the presence of any additional Inspectors, or of any counsel, who might have been supposed, as at Dukinfield, to be "prosecuting on behalf of the Crown." There were no magistrates on the jury, nor doctors, nor clergymen, but there were plenty of men who knew how to deal with colliery cases, and such men were scarce amongst the Dukinfield jury. The coroner (Mr. DUFFIELD) has had so much experience in these cases that he might almost qualify for a Government Inspectorship. The Crown was efficiently represented by Mr. BELL, and Mr. HEDLEY, his assistant; Mr. GILROY was his own advocate, and the interests of the relatives were watched by Mr. PICKARD, to whose valuable services and experience at the time of disaster very many colliery proprietors in Lancashire have been greatly indebted.

Although this Ince Hall inquest lacked so much of the sensationalism that was thrown around Dukinfield, and although not half so much time has been wasted at Ince as was thrown away in the "full and searching" enquiry that took place in Cheshire, the issue is far more satisfactory, and is, certainly, one in which the public mind has the fullest confidence.

But who shall say that the next inquest may not take place before a court as hopelessly incompetent as that which sat at Dukinfield? If every colliery owner could be certain of as fair an investigation as that which has been made concerning the working of the pits of the Ince Hall Company there would be no need for change; but, unfortunately, this is one of the exceptions; in some districts incompetent coroners and juries are the rule.

COAL MINING IN FRANCE.

Coal mining was a lucrative business among the French last year, if we may judge from the profits realised by some of the French colliery companies in and for 1873. The Montrambert and Beraudière Company extracted, for instance, last year 490,764 tons of coal from its mines, the profit obtained from sales having been 197,224*l.* The extraction of 1872 was 455,651 tons, yielding a profit of 126,254*l.* It will be seen that while the increase in the production effected last year did not exceed 8 per cent., the increase in the profit realised amounted to 55 per cent. The highly satisfactory results secured last year could not have been obtained without a notable augmentation in the selling price of the coal offered to the public; at the same time, the fact should be noticed that the cost of production also experienced an augmentation last year, in consequence of the increase of wages, the higher rates paid for various materials supplied, and the plus value of the coal consumed by the company's engines. Adding sundry accessory receipts, and deducting the charge of the company's obligation debt, the net profit available for dividend on the share capital of the company amounted to 193,371*l.*, a total presenting an augmentation of 75,894*l.*, as compared with the corresponding balance available for 1872. Of the balance of 193,371*l.*, 118,400*l.* was applied to the payment of a dividend of 1*l.* 9s. 6d. per share, the balance being devoted to sundry reserves, new works, &c.

The Rive-de-Gier Collieries Company had great difficulties to contend with in 1873 in consequence of injuries occasioned in 1872 to the principal pits of the Grand Croix basin, which were not completely repaired in the course of the last financial year. It is only recently that the extraction galleries of the company in the basin in question have regained their activity, and the company may be said to have been unable, to some extent, to satisfy the demands of industry. Nevertheless, the extraction effected by the company in 1873 amounted to 264,461 tons, or 11,575 tons more than during the preceding year. The production of coke was 62,792 tons, or 8301 tons more than during 1872. The profits realised by the company in and for 1873 were 70,049*l.*, a total presenting an augmentation of the sum of 35,197*l.* as compared with 1872. As the profits realised for last year admitted of a dividend of upwards of 2*l.* per share, it was deemed advisable to apply a portion to the special repayment of loans; the sum devoted to this object was 6000*l.* Including the liquid brought forward from 1872, the total available balance was 71,341*l.*, and after making the special redemption of debt already indicated, devoting 14,247*l.* to new works, &c., the council of administration was still enabled to divide 48,000*l.* upon the company's share

capital, a balance of 1456*l.* being ultimately carried forward to the credit of 1874.

The St. Etienne Collieries Company obtained very favourable results from its working operations in 1873. The company extracted last year 598,000 tons of coal, exclusive of 42,445 tons worked by the Terrenoire Forges Company at one point of the coarser coal. The net profits secured by the St. Etienne Company for 1873 amounted to 165,188*l.*, while those of 1872 were 68,923*l.* The same policy of prudence was pursued by the St. Etienne Company as that which round favour with its neighbours. Thus a large sum was devoted out of profits to new works, from which the company will benefit in future, and 8433*l.* was applied to a special repayment of the company's obligation debt. Even after making, however, these and sundry other deductions, a sum of 70,400*l.* was applicable for division upon the company's share capital, while a final balance of no less than 28,273*l.* was carried forward to the credit of 1874, as the council of administration is under the impression that the past twelve months must be regarded as an exceptional year, not likely to be repeated. The excellent profits realised in 1873 induced the shareholders in the St. Etienne Company to look forward to an extension in the operations of the undertaking, and the council of administration was authorised to acquire in the Meons district certain lands, exceeding some 4000*l.* in value.

COAL-CUTTING MACHINERY COMPETITION.—The contest for the premium offered by the South Staffordshire and East Worcestershire Institute of Mining Engineers was between the machines of Messrs. J. Grafton Jones, R. S. Norris, and J. E. Smith; and, the latter gentleman having retired from the competition, the council decided, considering the two remaining competitors had made great exertions to produce a successful hand-machine, to divide the premium between them. Mr. Norris's machine was considered best for hard coal. The proceedings at the meeting are reported in another column.

PREMIUM FOR COLLIERY PLANS.—The Roseberry Ironstone Company, of Middlesbrough-on-Tees, have offered through the advertising columns of the *Mining Journal* two premiums—100*l.* for the best, and 25*l.* for the second best, scheme for winning the ironstone in their Roseberry royalty, and conveying it to the North-Eastern Railway. As the intending competitors are to pay 10*l.* for the particulars necessary to enable them to compete, and as full working plans and sections, with specifications and estimated cost are to be sent in, whilst the highest premium would represent less than a professional man of moderate standing would charge for the work to be done, the company will, no doubt, upon proper application being made by intending competitors, vary the condition that the whole of the plans sent for competition are to become the property of the company. By this means the number of competitors would, doubtless, be increased, and competent men might be inclined to send in plans.

COAL AND IRON IN THE UNITED STATES.—The Central Pacific Railroad Company is experimenting extensively with steel rails at various points between Emigrant Gap and Truckee. Some 20 miles of steel rails will be laid down this autumn across the Sierras. The Central Pacific Railroad Company has concluded a contract with the Pacific Rolling Mills Company for re-rolling 5000 tons of rails, all to be delivered in the course of 1874. The "coal area" of Texas, the Indian Territory, New Mexico, Kansas, Missouri, Nebraska, Iowa, Wyoming, Colorado, Montana, and Dakota is estimated at no less than 513,000 square miles. The anthracite coal tonnage of Pennsylvania to August 8 this year amounted to 11,314,540 tons, against 12,034,603 tons in the corresponding period of 1873, showing a decrease this year of 720,063 tons. The bituminous coal movement of Pennsylvania to August 8 this year amounted to 1,742,680 tons, against 1,882,064 tons in the corresponding period of 1873. The discovery is noted of vast coal deposits on the line of the Ione Railway, California. This discovery is expected to exert an important influence upon the future of San Francisco.

LORD PENRHYN'S QUARRIES.—We are authorised to state that categorical answers were at once given last week to the committee of the North Wales Quarrymen's Union on the three leading points submitted by them, and on which the committee, in the statement of their last demands, declare that the whole issue hinges. These points consisted of—1. The appointment of a referee in cases of difference between the present head manager and the workmen.—2. The appointment of a manager with co-ordinate authority with the present head manager, and the recommendation by the committee of the Union of a particular individual for that appointment.—3. A guarantee of a fixed minimum of allowance (without any specific guarantee of work to be performed), except in those cases where the terms of the workmen themselves are agreed to. The other points, which the committee had stated to be "minor points," and some of which had been already conceded, were not gone into *seriatim*, but all received a definite reply.

MANUAL OF APPLIED ANALYSIS.—It is gratifying to be able to announce that Prof. R. GALLOWAY, of the Royal College of Science, Dublin, is at present busily engaged upon a "Manual of Applied Analysis," since the title and the name of the author will suffice to convince all chemists that it will be an important and valuable work. As educational treatises upon the science of chemistry Prof. Galloway's "First Step in Chemistry," "Second Step in Chemistry," &c., are unsurpassed, and his large experience as an analyst and as a teacher both before and since he accepted the professorial chair in the Royal College of Science, must have rendered him specially competent for the useful task he has now undertaken.

UNALTERABLE ALLOY.—An alloy consisting of copper 70 to 75 per cent.; tin, 2 to 11; lead, 15 to 20; and zinc, 0.5 to 1 per cent., has been patented in France by Mr. Jacobi. It is described as possessing a yellowish red tint, and may be used for objects of art, imitation jewellery, &c. When treated with polysulphides, chloride of antimony, chloride of arsenic, &c., this alloy becomes coated with a black platina capable of being polished.

THE CHANNEL TUNNEL.—It is now proposed that this project shall be carried out by a French and an English company, the general management being vested in a company chosen by the two boards. Towards the preliminary engineering works each company is to contribute 800,000*l.*, of which 40,000*l.* is definitely promised by the Northern of France; and 20,000*l.* more is added by Rothschild Brothers, of Paris, whose intimate relations with that railway are well known. The residue will be contributed by the French members of the promoting committee. With the English company no advance has been made over the original 30,000*l.* subscribed in 1872; but its moiety of the preliminary total, it is expected, will also be subscribed privately. The actual position of affairs at this time is that the *projet de loi* has been prepared, and will be presented on the re-assembling of the French Chamber in November by M. Caillaux, now Minister of Public Works, and formerly a member of the Channel Tunnel committee. The line of the main tunnel, which is to be large enough for a double line of railway, is drawn straight from St. Margaret's Bay, South Foreland, to a point very nearly midway between Calais and Sandgate. On the English side the London, Chatham, and Dover Railway will run off between the suburb Carlton and the town of Dover, whilst the South-Eastern Railway will branch off from about Shakespeare Cliff, and, passing to the rear of the Heights, will cross the harbour line of the former company and join the line to the village of St. Margaret's. This being parallel with the shore makes a sharp turn near that village, the alteration of the direction being there approximately a right angle. On the French side the connecting line bends diagonally to the westward, and joins by a fork the Boulogne and Calais Railway. In the longitudinal section the proposed tunnel presents a slight fall of 1 in 2640 from the centre towards either extremity, and the vertical depth of the highest point of its floor is 436 feet from Trinity high-water mark, and 200 ft. beneath the sea bottom itself. From the land levels of the existing railways the two approaches make long descents of over four miles each, with gradients

of 1 in 80 into the tunnel ends, over two miles being under the sea, the total of the whole amount of tunnelling being 30 miles. The scheme is approved by Sir John Hawkshaw and Mr. Brunlee, in England, and Messrs. Durioch, Bergeron, and Lavallee in France.

REPORT FROM CORNWALL.

Sept. 10.—It is really difficult for one to know what to say about mining matters in the present condition of affairs. To the partial activity of last week there has succeeded complete dulness this, and where to look for the silvery lining of the cloud one hardly knows, though that there is a silvery lining in this as in other cases cannot be doubted. The cost of production in our tin mines is certainly a good deal less than it was, and they are, therefore, by so much the more fitted to bear up against the present depression. But the point to be noted is the length of time they have already been waiting and working on under depressed circumstances in hope of better things. The depression has continued so long, and hopes of a revival have been so often disappointed, that the most exemplary patience is getting tired, and asks, apparently in vain, "What is to be done?" The natural answer to that question is "Cheaper the cost of production." Economise the working of the mines, and make the dressing operations more complete. Well, we have again and again pointed out how much there is to be done in this way, and how much Cornwall is behind other mining districts in these particulars. But what encouragement is there for doing it or anything while the arrangements of the sale of the produce remained as they are? An individual mine here and there may be able to raise tin cheaply, or to introduce economical arrangements into the working, and may be able to reap the advantage of its special skill and conditions. But as things now are it may be predicted with almost absolute certainty that if the general cost of production of black tin throughout Cornwall was to fall 10%, the standard would drop 8%. We do not blame the smelters for making all the money they can—it is their business to do so, only let there be no idea that while they are driving their own wheelbarrows they are aiding the struggling industry of Cornwall. No one outside the smelters' select circle can understand the motive of their movements. There are times when tin seems to be in demand everywhere except in Cornwall. Only the other day the standard went up 2%, and purchases were made for at least 3% higher; then came what was called a drop of 2%—altogether unneeded if the value of the metal had really only fallen to that extent, seeing that the unofficial rates were more than that above the official, and really a drop of 5% of it meant anything. Now it is understood that purchases are again being made in advance of the quoted rates. Can anyone, under such conditions, believe in the standard at all?

The mines really must take this question up, and we hail with pleasure the greater extent to which the question occupies the minds of the adventurers. It has been well pointed out that the preparation of black tin is a manufacture of a complicated character. The mines are capable of doing 9-10ths the work of bringing ore stuff into metal. The 1-10th they kindly forego for the benefit of interests in which they have no share. It is idle to talk about the difficulties of smelting. They exist only, we believe, in imagination and upon paper. To say nothing of the speculative action of the smelters, there is a very handsome profit made in the smelting process itself. Why should not the adventurers have this? A good deal is said at times about the difficulty and risk of the mines turning merchants. But with ordinary business aptitude and care we do not see that this need prove any very great obstacle. Many mines have been forced into the position already, thanks to the action of the smelting interest. What is the difference in a speculative point of view between stocking black tin in hopes of a rise and holding over, if need be, tin metal in prospect of an advance? Precisely the same conditions and objects that would influence the one would influence the other, and when the hand-to-mouth policy of raising and selling is abandoned there is no reason why the whole question should not be treated in the light and according to the rules of ordinary business transactions.

What we need now is that the tin mines should assert their independence. Let them work for their own benefit, not exist like sheep simply to be shorn. These are difficulties, but none that pluck and perseverance cannot encounter.

It is to be hoped that the rise in the copper standard which took place last week may continue. Copper mining does not occupy the position in the county that it once did, but there are districts which are almost wholly dependent on its welfare—notably the Caradon and the Tavistock—and these, too, need encouragement.

REPORT FROM SCOTLAND.

Sept. 9.—The Warrant Market continued quiet on Wednesday and Thursday last, and on the latter date the price touched 79s. 3d. Since then the tone has been much firmer, and a fair business was done from 80s. up to 83s., which was the closing price on Monday afternoon. Yesterday there was a large business done between 83s. 6d. and 84s. 6d., from which point a smart reaction took place to 82s. 9d., closing with buyers offering that price. To-day 83s. 9d. and 84s. cash were paid; at the close there were buyers at 83s. 9d., and sellers at 84s. Underlined are quotations for makers' iron:—

G. m. b. at Glasgow (deliverable alongside)	No. 1.	No. 2.
Gertsherr ditto	87s. 6d.	78s. 0d.
Coltess ditto	107 6	84 0
Summerlee ditto	100 0	82 0
Carnbroe ditto	92 0	81 0
Monkland ditto	90 0	80 0
Clyde ditto	87 6	80 0
Govan, at Broomfield ditto	87 6	78 0
Langloan, at Port Dundas ditto	107 6	83 0
Caldar ditto	111 0	82 6
Glenarmock, at Ardrossan ditto	97 0	81 6
Eglington ditto	87 6	78 0
Dalmellington ditto	87 0	76 0
Carroll, at Grangemouth, selected, ditto	100 0	—
Shotts, at Leith ditto	102 8	85 0
Kinnell, at Boness ditto	90 0	80 0
Bar iron	£10	—
Nail rods	10 0	—

SHIPMENTS.

Week ending Sept. 6, 1873	Tons	10,629
Week ending Sept. 6, 1874	Tons	9,483
Decrease		1,146
Total decrease since Dec. 25, 1873		151,522
Imports of Middleborough pig-iron into Grangemouth:—		
For the week ending Sept. 5, 1874	Tons	2,756
For the week ending Sept. 6, 1873	Tons	2,190
Increase		566
Total increase for 1874		39,082

The rise in pig-iron during the last few days is not difficult to account for, when the stocks in store are being weekly reduced till they have reached the low minimum of about 19,000 tons. It is true, that we have now 112 furnaces in blast, and that the make is being increased; but it should also be borne in mind that for a time some brands were out of the market, so that makers themselves were destitute of supplies, which will take some little time to replace. However, we do not look for much higher prices, even with these considerations in view, in the present state of trade, unless speculation enters and makes havoc of the market. There is a temporary stir at the malleable works on account of the hurrying forward of some orders for shipment before the close of the season; but the demand for home purposes is no way improved. The high prices demanded for new ships all the year till about the middle of last month restricted engagements, but we understand that the more favourable rates at which iron can now be supplied is encouraging owners to enquire after additions to their fleets. The number of vessels on the stocks on the 8th inst. is 103. No further change has been made in quotations for bars, which are being held more firmly. In machinery a good business is doing for shipment, the Customs returns giving, in nine items, the value of the week's shipments at 12,702. Two local firms have divided the contract for pipes for Dundee (we formerly noticed) between them—the amount for the whole pipeage being 28,034.

The liquidators of the Blochairn Iron Company (Limited) have

announced a dividend of 5s. in 11.; and we hear that the works will likely be sold, if not in one lot, piecemeal.

It has just been announced that Thomas Wingate retired from the co-partnership of Thomas Wingate and Company, shipbuilders, engineers, and iron-founders, Whiteinch, Glasgow, on December 31, 1873; and that the business is continued under the same firm as formerly.

This has been an exceedingly heavy week in coal shipments, the amount being 60,748 tons, again 39,844 tons in the corresponding week of last year. Fully the half of the whole amount was entered for Glasgow and Troon, these together making 30,500 tons. Their destinations are chiefly Canadian and Baltic ports, the great object being to get them forward before the frost sets in. These large exports have been made at about half the cost charged last year, and are regarded as barely remunerative. The home trade is very dull, and prices are about 6d. easier. Some of the ironmasters are offering good household coal at rates under the sale coalmasters, with the view of compelling them to reduce the wages of their colliers to nearer their own level. Ironmasters' colliers are getting from 4s. 6d. to 5s., while coalmasters' colliers have 5s. to 6s. a day. The miners are working with a grudge—a few are on strike—but where binging is not resorted to not more than three days' work can be had per week; in other cases the men take an idle day per week. In Fife and Clackmannanshire the lock-out is complete, the pits all idle, and no prospect of a settlement. A meeting of delegates representing 40,000 miners was held here on Monday last—reporters were excluded. Mr. Alexander Macdonald was present, and addressed the meeting. The desirability of healing the breaches that had been made in the ranks by recent dissensions and of establishing a new Union were, we believe, the subjects under discussion, but no definite resolution was arrived at.

The quantity of gunpowder shipped last month from the Clyde—foreign—amounted to 100,000 lbs., which is a decrease; the decrease for the eight months being no less than 145,000 lbs.

There has been more firmness and steadiness with slightly improved prices for mine and metal shares, an advance being marked for Pyrites, Huntington Copper, Glasgow Caradon, Marbella, Merry and Cuninghame, Port Washington, &c. Tharsis new shares and Young's Paraffin offered at present rates; while Emma shares are flat at declining prices. Omoa and Monkland iron and coal shares are rather held for an advance.

THE SCOTCH MINING SHARE MARKET—WEEKLY

REPORT AND LIST OF PRICES.

Since my last report a fair amount of business has been done in this market, compared with what has been doing for some time past, but the movements in prices have been variable, though, perhaps, the general tendency has been upwards. It is likely that business will get brisker as prices improve, as it now seems probable that no great amount of shares will change hands until prices are a good deal higher, at least, many investors who are into concerns considered to have any chance at all of getting out of the present depression declare their decision to hold on until prices go up again, and they can sell out with a profit, or, at least, a much smaller loss than would be incurred in many cases at present, and as it is well enough known that when the market becomes brisk the bad go up along with the good we may now look for a gradual (perhaps very gradual) improvement in prices, owing to this general determination to hold on. The pig-iron and coal markets both show a rise for the week, the former being especially strong. Copper steady, and rather dearer. Lead and tin also firm. Fife Coal shares are flat. A very heavy rise may be pointed out in Nant-y-Glo and Blaina Preferred from 42½ last week to 53 to-day. In copper shares, Canadian Pyrites and Yorke Peninsula show large advances, the latter especially, and close steady after some fluctuation, the demand for them keeping good. Oil shares have recovered much of last week's depression, although they are again looking weak. In Americans the only description dealt in has been Emmas, and they are slightly lower. To-day the market appears dull, and the forenoon's prices are—Emma, 38s.; Huntington, flat at 57s.; Marbella, 5½; Merry and Cuninghame, 67s. 6d.; and Tharsis, 25 to 25½. A detailed list of the several days' business follows.

On Thursday last, as mentioned at the close of my last week's report, the market was steady, and in some cases higher; a good business was done. Canadian Copper Pyrites opened flat, declining to 56s. buyers, a rally, however, took place, and they closed 58s. to 59s., or 1s. 6d. per share higher than yesterday's closing price. Emmas done at 38s. 6d., closing 38s. to 39s. Flagstaff, 3½ to 3¼. Glasgow Caradon done at 26s. 6d. and 27s., closing 26s. 6d. to 27s. 6d.; the next sale of ore from this mine, on Thursday next, will be 255 tons, which is the largest this year, and 20 tons more than last month's. Glasgow Port Washington, 40s. to 42s., the all-paid shares also improved, being done at 5½, closing 5½ to 5½. Huntington looked better than they have for some time past, being done at 55s. up to 56s., closing 55s. 6d. to 56s.; these are still very low quotations for a 8d. paid share, paying 5 per cent. dividends; if any recovery takes place in the market for mining shares will be sure to advance considerably. Marbella done at 5½, closing 5½ to 5½. Merry and Cuninghame done at 66s. and 66s. 6d., closing about these prices. Monkland ordinary shares unchanged at 79s. to 80s. Omoa and Cleland done at 63s. to 65s. Tharsis steady, done at 25½, closing 25½ to 25½. Young's Paraffin shares done at 17½, closing 17½ to 17½. In the afternoon the low quotations of yesterday have evidently been given up by some one, and a recovery of 5s. per share has been established, business was done at 5½, closing 5½ to 5½. London and Glasgow Engineering done at 29, closing 28½ to 29; allowing for the dividend of 18 per cent. payable soon on these shares (equal to 2½ per share), they will yield an investor about 15 per cent. Scottish Wagon Company quiet, at 12 to 12½. In Yorke Peninsula a good business was done from 4s. 6d. upwards, closing ¼ to ½; not many shares, however, are offered, holders preferring to wait to see what is going to come out of the late discovery. United States Rolling Stock unchanged at 13½ to 14½.

On Friday the amount of business done was very small, but the market was steady, and the movements mostly upward. The principal feature was a good demand for Yorke Peninsula shares, which advanced 3½, Canadian Copper Pyrites shares done at 60s., closing 59s. 6d. to 60s. Ebbw Vale shares done at 23½ and 23½, closing 23½ to 23½, or 1½ higher than last quotation. Emma shares done at 38s. 6d., closing 38s. to 39s. Glasgow Caradon shares quiet, done at 27s., closing 26s. 6d. to 27s. Glasgow Port Washington shares good, done at 42s., closing 42s. to 44s. Lechore and Capletrae shares flat, offered at 7½ to 15½. Merry and Cuninghame, 66s. 6d. to 66s. 6d. Monkland ordinary shares, 80s. to 81s., being slightly higher. Niddrie Coal shares done at 41s. 6d., also slightly higher. Tharsis shares quiet, but the turn better, done at 25½, closing 25½ to 25½, and the new share 17½ to 17½. Young's Paraffin shares again better, at 5½ to 5½. London and Glasgow Engineering shares lower, at 27 to 29. Scottish Wagon shares firm, at 12 to 12½. Several transactions have taken place during the week in the shares of the Glasgow Patent Ice Company (Limited) (10s. shares, all paid) at 9½, to-day, however, they have declined, and close 9 to 9½.

On Saturday no transactions took place. Bolckow, Vaughan (Limited) A shares are 2½ higher, at 59½. Nant-y-Glo and Blaina, 46½, being 4½ higher, without business. Cape Copper shares are 1½ higher—about 28. Pannellillo shares rather lower, and offered at 22s. 6d.; buyers at 17s. 6d. Rio Tinto, 6½, being 1½ lower. In the present depressed state of the market for mining shares the attention of investors is being drawn to slate quarries as a channel for the investment of the money which would otherwise have been put into mines; few of these companies, however, are quoted in the shares, and reliable information is difficult to be obtained about them, as they are mostly worked by private enterprise. Enormous profits are, however, well known to be realised by this description of enterprise when properly gone about—the best known instance, perhaps, being that of the quarry carried on by the representatives of the late Lord Palmerston, which is said to be yielding nearly 70,000l. a year. This property is situated in Wales, which appears to be the part of the country where slate mines are most plentiful, and the principal districts being Bangor and Festiniog. From the second annual report of the Conglog—a limited company, situated in the Festiniog district, and near some of the best paying properties—it appears that very satisfactory progress is being made, and from the reports of practical parties who have inspected the quarry, and others, the profits are expected to be enormous, and certainly if anything like the success attends this company which has attended others in the same neighbourhood these expectations will not be far wrong, as the capital on which dividends have to be paid is indeed very small (22,000l.), and I notice the expenses of management are also very small—altogether, the company appears in a very healthy state. The Chairman, at the close of the proceedings at the meeting, took occasion to recommend the purchase of the shares. They are, however, seldom in the market; transactions have taken place at 10s. to 1½ premium per share, but a few, however, are offering at present par—10s., the shares being 10½ fully paid, and they will likely soon be picked up, as they present a very fair investment. I notice that the Glasgow slate merchants have advanced the price of Welsh slates 10 per cent. last week.

On Monday the market was good, and prices nearly all advanced, though, as usual for some time past, only a small business was done. Canadian Copper Pyrites done at 60s., 61s., and 62s., closing 62s. to 63s.; Ebbw Vale done at 23½ and 23½, closing 23½ to 23½; Emmas done at 38s., closing 37s. 6d. to 38s. 6d. Glasgow Caradon, 26s. to 27s. This company's next sale of copper ore on Thursday week will be 255 tons, same as at this time last year, but 20 tons more than last month's. Huntington done at 57s., closing 58s. to 59s.; Kapunda unchanged, at 5s.; Lechore and Capletrae offered at 7½; Marbella done at 53½ to 53½, closing 52½ to 53½; Merry and Cuninghame done at 66s., 66s. 6d., and 67s., closing steady 66s. 6d. to 67s.; the all-paid shares also improved, being wanted at 8½, or ¼ higher than last quotation. An extraordinary general meeting of the shareholders of this company is called at Glasgow on the 11th inst. for the purpose of confirming or rejecting the special resolution in regard to the vendors being relieved of their guarantee for a 10 per cent. dividend, passed at the meeting on Aug. 21 last. A further heavy rise may be noticed in Nant-y-Glo and Blaina preferred, closing with buyers at 51s. 6d. shares 51s. to 52½, 25½ to 26½, and 26½, closing 26½ to 25½; Young's Paraffin done at 5½; London and Glasgow

Engineering, 27½ to 28½; Scottish Wagon Company done at 12½; and Scottish-Australian Mine shares steady; Yorke Peninsula, 16½ to 16½.

On Tuesday the market was more animated, though prices were in some instances lower. Benhar done at 14½ and 14½. Bolckow Vaughan "A" shares at 57½ and 57½, closing 57 to 57½. The Five per Cent. Preference Shares of this company were also done at par (25s.) ex div. Canadian Copper Pyrites again good, done at 63s. 6d., 64s. 6d., and 65s., closing 64s. to 64s. 6d. These shares are very lively, always moving one way or another; they show a rise of 9s. for this week. Emma shares done at 38s., closing slightly better at 37s. 6d. to 38s. 6d. Fife Coal Company offered at 5½, being ¼ lower. Huntington good, buyers at 58s., with few sellers at 60s. Marbella shares done at 5½, closing 5½ to 5½. In Merry and Cuninghame a large business was done from 61s. to 68s., closing about 67s. 6d. Monkland ordinary done at 79s. and 80s., closing so. Niddrie Coal done at 41s. Omoa and Cleland done at 64s., closing 64s. to 65s. Tharsis lower, done at 25½, 25½ to 25½, closing 25½ to 25½, buyers at 25½. New shares steady, at 17½ to 17½. Young's Paraffin, 5½ to 5½. London and Glasgow Engineering, 27 to 28. Yorke Peninsula shares declined on some sales, being done as low as 3s. 9d., but closed better again at ¼ to ½. There was no reason for this fall—quite the opposite; and the shares will doubtless soon regain the former quotation, if not go higher. The last day for this account has been changed from Saturday, the 12th inst., to Friday, the 11th inst., Saturday being a holiday; the first day for the new account (settlement end of month) will, therefore, begin on Monday.

On Wednesday a fair amount of business was done; the movements in prices, however, were very variable. Benhar, 14 to 14½. Bolckow Vaughan, A, unchanged, at 57½. Canadian Copper Pyrites done at 63s. 6d. to 65s., closing at 63s. to 63s. 6d. Glasgow Caradon done at 26s. 6d., closing at 26s. to 26s. 6d. Huntington at 58s. 6d. and 59s., closing at 58s. 6d. to 59s. 6d. Marbella again good, done at 5½, 7½ to 16½, and ½, closing at 5½ to 5½. Merry and Cuninghame done at yesterday's prices, but closing rather better at 67s. 6d. to 68s. Niddrie coal done at 40s., closing at 38s. to 40s. Shotts weak, offered at 73, buyers at 70. The annual general meeting of the shareholders of this company was held in Edinburgh at the company's offices to-day. Mr. William Handyside, the chairman, presiding. The report, which was unanimously agreed to, stated that the net balance of profit for the year ending June 30, 1874, after making allowance for exhausted or deteriorated plant, was 17,510l., which, with balance from last year, 7573l., made 25,083l. available for distribution, out of which the directors recommended, after payment of a dividend of 5 per cent. on the preference shares, a dividend at the rate of 10 per cent. per annum on the ordinary stock and share capital of the company, payable free of income tax on Oct. 1, 1874. This absorbs 24,933l., leaving only the small sum of 450l. to be carried forward. The irregular working of the miners had involved much loss by restricting the output of minerals and production of pig iron. Good progress had been made in the development of existing mineral fields, for which, however, the expenditure on machinery, plant, and pit sinking has been very heavy, necessitating an increase on the mortgage debt of 10,000l., and of 600l. on the share capital, by the issue of 165 new ordinary shares; and it is stated that a continuance of this heavy expenditure may be anticipated until the completion of the works now in progress. But the completion of these works will not only render the capital expended productive, but afford the command of a manufacturing power of from 70,000 to 75,000 tons of pig-iron per annum, being an increase of about 40 per cent. on the normal production of the works, besides a surplus output of 1000 tons of coal per day beyond the consumption of the works. In answer to a question regarding the company's success in boring for hematite ore in Cumberland, the Chairman stated that they had got down about 30 fms. without being troubled with the water, and had discovered some ore, but that it was not yet determined whether the pits should be sunk and permanent machinery got. The general opinion of the speakers seemed to be that the works were never in a better position than at present, and that having during the bygone year passed through an unexampled crisis in the iron trade, they were again ready to take the current as it rose. The small profit from the foundry (543l.) was explained by the fact that the greater proportion of the foundry castings had been employed at the company's own works. Several branches of it also which had been found to be unprofitable had been given up. The company found that they could not, like other companies, get the same amount of work out of their men as formerly, and it still remained to be seen whether they were pleased with their present position or not. About 100 new houses had been added during the year to the property of the company. Sir William Millar, the largest shareholder, was elected a director in place of Mr. Mackenzie. Tharsis dull, at 25½, closing at 25½ to 25½. Young's Paraffin lower, at 5½ to 5½. London and Glasgow Engineering, 27 to 28. Scottish Wagon Company done at 12½. Yorke Peninsula improved, business done at ¼, closing at ¼ to ½, with few sellers. Subjoined will be found the latest quotations.

Amount of share.	Amount paid up.	Name.	Latest price.
10	4	Arnstons Coal (Limited)	4
10	10	Benhar Coal (Limited)	14½
100	35	Bolckow, Vaughan, and Co. (Limited)	57½
10	5	Capletrae Coal (Limited)	7½
10	10	Chillingham Iron (Limited)	10½
32	20	Ebbw Vale Steel, Iron, and Coal (Limited)	23
10	3	Fife Coal (Limited)	5½
10	6	Glasgow Port Washington Iron and Coal (Limited)	42s.
10	10	Lechore and Capletrae (Limited)	7½
10	10	Marbella Iron Ore (Limited)	5½
10	3½	Merry and Cuninghame (Limited)	67s. 6d.
10	10	All paid	79s. 6d.
10	10	Monkland Iron and Coal (Limited)	79s. 6d.
10	10	Ditto 7 per cent. Guaranteed Preference	8
100	100	Nant-y-Glo and Blaina Ironworks pref. (Limited)	53
10	2	Niddrie Coal (Limited)	40s.
10	4	Omoa and Cleland Iron and Coal (Limited)	64s.
50	50	Shotts Iron	73
10	4	Ditto New, issued at 2½ premium	6½
COPPER, LEAD, SULPHUR, TIN.			
10	7	Canadian Copper Pyrites (Limited)	63s.
10	10	Ditto All paid	6½
10	7	Cape Copper (Limited)	27½
5	5	Dreke Walls Tin and Copper	5
2	2	Dunsley Wheel Phoenix Tin (Limited)	15s.
1	25	East Black Craig Lead (Limited)	25
1	1	Glasgow Caradon Copper Mining (Limited)	26s. 6d.
1	15s.	Ditto New	18s.
1	1	Huntington Copper and Sulphur (Limited)	1
1	1	Islay Lead (Limited)	1
25s.	23s.	Kapunda Copper (Limited)	5s.
4	4	Pannellillo Copper Mining (Limited)	25s.
10	8	Rio Tinto (Limited)	6½
10	10	Russian Copper Mining (Limited)	46s.
1	1	Scottish Australian Mining (Limited)	13½
1	5s.	Ditto New	3s.
10	10	Tharsis Copper and Sulphur (Limited)	25½
10	7	Ditto New	17½
1	1	Yorke Peninsula Mining (Limited)	8s.
1	—	Ditto 15 per cent. Guaranteed Preference	2s. 6d.
GOLD, SILVER.			
1	1	Australasian Gold Mines Investment (Limited)	1
20	20	Emma Silver Mining (Limited)	38s.
10	10	Flagstaff Silver Mining (Limited)	3½
5	5	Last Chance Silver Mining (Limited)	1½
OIL.			
10	7	Dalmen Oil (Limited)	5½
5	5	Midlothian Mineral Oil (Limited)	3½
10	8	Uphall Mineral Oil (Limited)	4
10	8½	Young's Paraffin Light and Mineral Oil (Limited)	5½
MISCELLANEOUS.			
10	10	Dumfries Peat Fuel (Limited)	10
10	10	Highland Peat Fuel (Limited)	10
50	25	London & Glasgow Engineering & Iron Shipbuilding	28
20	7½	Peruvian Nitrate (Limited)	4
10	10	Railway Access	14
10	10	Ditto Preference, 1875, Redeemable	9½
10	10	Scottish Wagon Company (Limited)	12½
1	1	Ditto New	21s.
20	20	United States Rolling Stock	14

Last day for this account Sept. 11; settling day, Sept. 16.

NOTE.—The above list of mines and auxiliary associations is as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them and such information as can be ascertained from time to time to be inserted in this list, they will be good enough to communicate the name of the company with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker, Post Office Buildings, Stirling, Sept. 10.

THE SHOTTS IRON COMPANY.

The annual meeting of shareholders was held on Wednesday, at their office, Prince's-street, Edinburgh.

Mr. HANDYSIDE (Chairman) presiding. The report by the directors stated that the net balance of profit for the year ending June 30, 1874, after making allowance for exhausted or deteriorated plant, was 17,510l. 17s., to which fell to be added undivided profits carried forward from last year, 7572l. 18s.; total, 25,083l. 15s.; out of which the directors recommended, after the payment of a dividend on the preference shares of 5 per cent., that a dividend at the rate of 10 per cent. per annum be declared on the ordinary stock and share capital of the company, leaving to be carried forward 450l. 13s. Considerable progress has been made during the past year with the alterations and extensions at Shotts and Castledale Works. The mining operations of the past year, though carried on under great disadvantages, have made good progress in the development of existing mineral fields. Various new pits have been sunk and fitted with heavy machinery, while others are in course of completion. As stated in last report, the expenditure on machinery, plant, and pit sinking has been very heavy during the past year, and until the completion of the works now in progress a continuance of such expenditure may be anticipated; but the completion of these works will not only render the capital expended productive, but afford the command of a manufacturing power of from 70,000 to 75,000 tons of pig-iron per annum (being an increase of about 40 per cent. on the normal production of the works), besides a surplus output of 1000 tons of coal per day beyond the consumption of the works.

The CHAIRMAN, in moving the adoption of the report, said that from what he and the other directors had seen they were satisfied that the works of the company were never in a better condition than at present. He then referred to the additional works in progress, the building of workmen's houses, and the obstacles

that had been placed in the way of the company through strikes and other disadvantages. During the past year the directors had had a great deal of anxiety in the carrying on of the works, but he trusted that they were now entering on a more prosperous course. He concluded by proposing a dividend on the preference shares of 5 per cent., and a dividend at the rate of 10 per cent.—Dr. MILLER wished to know the state of the Cumberland Works, and as to the success in the boring for hematite.—The CHAIRMAN said that they had got some ore on the surface, but they had not yet got permanent machinery for the working of it. They had got down about 30 fms. without being troubled with the water.—Mr. G. S. ANDERSON (Glasgow) seconded the adoption of the report. He said that they had got the works in a first-rate condition, and he thought they might now hope for a season of prosperity.—The report was unanimously agreed to.—In reply to a question by a shareholder as to the foundry, which he thought produced too small a profit, Mr. ORMISTON said that during the past year a large proportion of the foundry castings had been for the use of the works.—The CHAIRMAN said that the attention of the directors had been drawn to the foundry, and they would see that, as far as possible, it would yield a profit.

REPORT FROM THE FOREST OF DEAN.

Sept. 10.—Some changes have occurred in the district since our last report. Some of an adverse character, whilst others have been of an encouraging nature. We referred in our last report to certain small coal works on the western side of the Forest, where disputes had arisen between the employers and the workmen affecting between 200 and 300 men. The proprietors stopped the works, as was understood, on the ground that they did not pay, although it is reported that no reasons were assigned on the notice papers stuck up at the pits, but simply that at such a date the work would cease and the men would be out. Taft Level and Speculation Collieries were included in the number, we believe, besides one or two others. The work ceased accordingly, and the men brought out their tools, but subsequently enquired whether they could resume work, but were informed that they could not do so unless they submitted to considerable reductions, which the men allege would be equal to 9s. a week off the men's wages, and 5s. a week off the boys' wages. The men, therefore, complain of such an unusual course of stopping works before assigning the reasons, as they have no chance under such circumstances of trying to come to an understanding ere the time expires, and, if successful, preventing loss of time and wages, which to working men is of grave consideration. This complaint appears to be founded on justice and reason, as workmen have an undoubted right to look to their employers for fair play. Several attempts have been made to arrange matters, which, as the masters stood out, ended in a temporary strike, which, excepting one pit, has now been settled, and the men are at work. A meeting was held between the representatives of the men, the agent, and the manager, at Wimbury pit, but ended without being enabled to come to terms, and so the men of that place are now on strike, and the Union will pay them a week's wage on Saturday next. It is to be hoped, however, that some reasonable bases for agreement, and an amicable settlement will be found, so as to put an end to the strike, for strikes are certainly undesirable things. The miners' agent has this week published a letter, in which, alluding to one of the pits and its disagreements, he says that if the proprietor has made a bad bargain in purchasing the property the men could not help that, and having only their labour to sell, they had a right to make as much of that as ever the markets would allow.

The local coal trade has improved, at least at several of the pits, and hence employment is more in request. An additional furnace, too, has been put in blast, and hence work at that place is looking up. We are happy to report improvement in the iron trade, as within the last few days some 800 tons have been cleared out. This improvement we would hope, after such a long dull period, be looked upon as likely to be lasting.

The Littledean Woodside Coal Company (Limited) has now completed its branch line, by which their works are connected by rail with the Great Western system, forming a junction with the Whimsey branch, near the Dam. The company's property includes the Paragon, Addis, and Haywood Pits, and flourishing brickworks on Bilson Green, adjacent to the Paragon Pit, their system of rail now connecting all their works. The company is doing a large brick trade, and to meet the increasing demand for the article an additional kiln is now in course of construction. By the courtesy of the manager (Mr. J. M. Johns) we rode over the line on the engine this morning, and can testify, from observation, that the line and works speak well for the engineering skill and management which have directed the operations to a successful issue. As we have already remarked, the rails connect the three pits. Addis Pit, in the wood, and Haywood Pit, between the town and Haywood, are nearly in a line with each other on the hill side, a little above the vale. In connection with these pits there are two machine-houses, one to weigh for the country trade, down by the side of the turnpike-road, at the bottom of the town, and one a little within the wood, to weigh for sending off by rail. The line has all necessary appliances of sidings, empty runs, and rails for full carts, so as to facilitate turning, shunting, and running out. Including these accommodations, sidings and runs, the rails would, if laid in a direct line, occupy a distance of about two miles, but the direct distance across from the pit to the Whimsey is considerably less than that, the line having to be cut circuitously, the nature of the locality rendering looping and curves requisite to adjust the gradients. The rails ensure a remarkably easy run of the engine and carts, the work being apparently well accomplished. At the Haywood Pit end, near the turnpike, there are screens erected for tipping the coal through, the lime, or furnace coal, however, being much of it sent off without, the company supplying a considerable number of the ovens in the neighbourhood from their pits. The tip (with screen) for supplying the railway trucks for distant trade is erected in Holly Hill Wood, by which means the force of strong winds is much broken, an advantage for the workmen of considerable importance in chilly or cold weather. The coal trains run from the pits, by a level crossing over the turnpike-road, down to this tip, and the trucks, when filled, are sent off, via Whimsey branch, to the main line, and on to their destination. The two engines at Haywood Pit were most satisfactorily, and altogether the works and their management reflect the highest credit upon those concerned in their direction. The company has been, even in its incipient stages, quite a success, paying all along, we believe, 10 per cent. upon its expended capital, so that now its distant trade obstructions are removed by securing the necessary outlet. By the construction of its connecting branch of railway it may be legitimately expected that a great impetus to its prosperity will be the result.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Sept. 10.—The trade of Derbyshire has undergone no change since our last notice, with the exception that in one of our colliery districts some complication is likely to arise. So far as pig-iron is concerned the produce is of a full average character, and the same may be said with regard to the manufactured material. The foundries at Staveley, as well as those on the Erewash Valley line of railway, are now very well employed, and there has been no falling off with respect to the out-put of Bessemer steel and rails at the works adjoining the Dronfield Railway siding of the Midland Company. In the same locality the collieries are doing a very fair business to the South, and the men are now working very steadily. Near to Alfreton it is understood that notices have been given to the miners at the Tibshelf, Wingfield, and Shirland collieries that they will be required to submit to a reduction of 10 per cent. in their wages. The last-named colliery was purchased some time since by the South Yorkshire Miners' Association, but the transfer has not yet been completed. The proposal is being strenuously opposed by the men, and there is every appearance of another stirring time in South Derbyshire. In Sheffield the trade is very much as it has been for some time past, the Bessemer establishments being those that are the best employed, there having been no falling off in the demand for rails. There is, however, not so much doing in tires, axles, and other forgings. In cast-steel there is no alteration, so that the workmen are not fully employed. At the extensive malleable works of Crowley and Sons, at Kelham, now the largest known, there is considerable activity in most fine castings, for which the firm has a world-wide reputation. The coal trade is rather better than it has been, and more is being sent from South Yorkshire to Hull and Grimsby for shipment to the North of Europe than for some time past. At

several collieries, however, differences have arisen that are likely to militate against the interest of both masters and men. At the Bloom House Colliery, Darton, belonging to Mr. Lodge, the men have been out for a week, in consequence of the top men refusing to submit to a reduction of wages. At the Oaks Colliery, Barnsley, there is a good deal of agitation, and the men have held several meetings during the week respecting the wages question. The men state that in July last an agreement was entered into between them and the manager that they should work at a reduction of 10 per cent. on the then wages for three months. The men now say the company desire them to accept the 2½ per cent. reduction, as agreed upon by the arbitrators.

THE COAL TRAFFIC BY RAILWAY TO LONDON FROM YORKSHIRE AND DERBYSHIRE.—There has been a marked decline in the consumption of coal in the metropolis during the whole of the present year, a fact in a great measure due to the high prices of last year, which led to various methods being adopted for economising fuel. Taking August last, we find that the quantity of coal sent by railway was considerably less than for the same period of 1872 or 1873. The strike in South Yorkshire seriously affected the traffic by the Great Northern, during the last month in particular, and in consequence for the first time since coal was conveyed to London by railway that line has fallen to the fourth place amongst the lines taking coal direct to the metropolis. The Great Western, also for the first time, taking its position. The loss of revenue to the Great Northern last month, as compared with the corresponding one of 1873, will be fully 70,000. It may be said that the recent disputes at the collieries of Earl Fitzwilliam and the Stafford Main Company added considerably to the falling off in the Great Northern traffic, for whilst in August, 1873, there was sent from them 4180 tons, not a ton was sent from them last month, when the pits were entirely closed. The Manchester, Sheffield, and Lincolnshire Company also suffered very much, it being the main feeder of the Great Northern, the loss having been on the freight of from 20,000 to 25,000 tons a week. A little more coal is being sent from South Yorkshire over the London and North-Western, via Penistone and Guide Bridge, than during the previous month, so that the line has well maintained its position. The Midland has not done so well, but it still heads the list of railways carrying coals to London. The following figures show the tonnage of coal carried by all the railways to London during the month of August 1872 and 1873:—

	August 1872.	August 1873.
Midland	Tons 127,503.	Tons 120,754.
London and North-Western	7,735	76,769
Great Northern	77,381	56,219
Great Western	59,807	61,139
Great Eastern	59,151	42,543
Other lines	2,215	3,389

Total

Tons 399,855	Tons 360,853
--------------	--------------

The decline by the Midland is principally from Eckington, Sheepbridge, Staveley, and a few other places, but a less tonnage went over the line as well from West Yorkshire, for whilst in August, 1873, there was sent from the Sharlstone and five other collieries 8950 tons, last month they only sent about 4200 tons. Of Silkestone coal there was taken over the Great Northern last month, from six of the principal collieries, 7900 tons, against 16,100 tons for the corresponding period of 1873. Again, of the ordinary Thick coal there was conveyed by all lines, from 12 of the largest collieries in South Yorkshire, 11,600 tons in August, last year, whilst they only sent 6750 tons last month. The total decrease during the first eight months of the present year, as compared with the same months of 1873, was no less than 321,930 tons, the following being the tonnage carried during the two periods:—

	1873.	1874.
Midland	Tons 1,065,908	Tons 1,007,804
London and North-Western	664,969	623,522
Great Northern	619,180	523,143
Great Western	442,928	403,386
Great Eastern	434,511	380,463
London and South-Western	21,835	18,448
Other lines	9,844	1,278

Total

Tons 3,291,175	Tons 2,969,244
----------------	----------------

The falling off by the Great Northern, it will be seen, was no less than 126,037 tons, representing a loss of revenue of upwards of 40,000. The loss to the Midland will be about 17,000, on the year, whilst the Great Western and the London and North-Western will be fully as much. It will be apparent that the views of the Select Committee on Coal, with respect to that used for domestic purposes, "That the future increase of consumption under this head may be expected to coincide with the increase of population," are not being realised, so far as London is concerned.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Sept. 11.—The Pig-Iron Trade of South Staffordshire is, on the whole, a degree steadier; but the improvement is not so great as might be inferred from the number of additional furnaces which are being put into operation. The desire to distribute more widely the "dead" charges, together with the belief that a declared reduction in the price of coal is imminent, are the reasons assigned for the re-lighting of furnaces; and it is quite obvious that such a course is not warranted by any actual improvement in the demand, but common cinder pig is selling at 3l. to 3l. 5s., and all-mine at 5l. 10s. to 5l. 15s. per ton. Cold-blast iron for foundry purposes is in very actively-sustained demand. In the finished iron branch the demand shows a tendency to improve, and there is every reason to believe that a brisk trade would be forthcoming, but for the prevalent idea that a reduction in prices will be declared on Quarter Day. That there is good reason for such an idea is confirmed by the fact that the Coalmasters' Association has arranged to hold a meeting in Dudley to-morrow (Friday) to discuss the question of prices. It is believed that a substantial reduction will be declared, accompanied by a notice to the miners of a further drop in the rate of wages. Pending the result of this meeting, the business of the week in finished iron has been of a restricted nature, and it is unlikely that any orders of importance, other than those of an urgent nature, will now be given out before quarter-day. Sheets and plates command a steady enquiry, and there is rather more doing than last reported in hoops, rods, and gas strip. Quotations are without change. At the foundries and fitting-shops throughout the district there is a fairly satisfactory business doing in the principal classes of production.

The Darlaston Steel and Iron Company's large and important industrial concern, which since the death of Mr. Samuel Mills, of Darlaston (by whom it was carried on with marked success for many years), has been in the hands of a private joint-stock company, is about to undergo considerable development. The mineral area of the company's property comprises 200 acres of freehold coal and ironstone deposits at Darlaston, Bescot, and Horseley, and 693 acres of leasehold coal at Essington, in the Cannock Chase district. The average yield from these mines is at present 3000 to 4000 tons of coal and ironstone weekly. This out-put it is intended to augment until it reaches an average of 300,000 tons per annum. The completion of a private railway, which will connect the collieries at Essington with the London and North-Western line, also forms a part of the proposed scheme. Both the coal and stone are of excellent quality, and command a ready sale in the local market. The blast-furnaces of the company are three in number, and produce 20,000 tons of pig-iron per annum. The mills, forges, steelworks, and fitting shops at Darlaston Green and King's Hill are on a very complete and ample scale, and are capable of producing an annual yield of 25,000 tons of iron and steel. The area covered by the ironworks is 12 acres in extent. In order to accomplish the contemplated extensions and developments it has been decided by the directors to issue mortgage debenture bonds, bearing 7 per cent. interest, to the extent of 150,000l., on security of works and mineral area valued at 300,000l., and which is subject only to a prior charge of 32,628l. Only 40,000l. of these debenture bonds will be offered for public subscription, the remainder having been taken up by the directors and other shareholders. In addition to the security offered in the properties specified, royalties on the coal and ironstone raised, at the rate of 8d. per ton for the freehold and 4d. per ton for the leasehold, will be payable and vested in trustees for the redemption of the bonds by annual drawings at 2½ per cent. The whole of the bonds are terminable in 1889.

In North Staffordshire the improvement recently noted in the Iron Trade is fairly well sustained, bars having especially improved in demand. More is doing in merchant iron on Russian account, but the business in this direction does not present an ordinary season average. Owing to the heavy stock on hand the improvement in pig-iron is slow. Coal ranges from 9s. 6d. to 10s. 6d. for manufacturing and 12s. 6d. to 15s. 6d. for household purposes.

Quotations for local stocks and shares on the Birmingham Exchange to-day include the following:—Sandwell Park Colliery (10l. shares), 70 sellers; Cannock and Huntington Colliery (Limited), par; Felsall Coal and Iron (Limited), 3 dis. buyers; John Bagnall and Sons (Limited), 7½; Chillington Iron, 5½; and Patent Shaft and Axle, 5 prem.

Heavy hardware in South Staffordshire commands somewhat steadier enquiry than recently reported, the demand having especially improved for mill and forge machinery, girders, boilers, tanks, and horizontal engines. Gas and water mains are also in request, and the slight concession recently made in the price of heavy chains

and anchors has brought out some tolerable orders for those classes of production.

The *Birmingham Daily Post* says that the opinion expressed on the 'Change by Staffordshire ironmasters, who as members of the Iron and Steel Institute were present when Mr. Crampton particularised his furnace, vary as to its qualifications. There seem, however, to be very little division of opinion as to the probability of a method of steel making being adopted which shall be much less expensive and cumbersome than the Bessemer, whose wide application is retarded, not alone by the expensiveness of the plant, but likewise by the heavy prices to be paid for the rich ores requisite to produce raw iron. Views of men who believe in the practicability of making good steel from lean ores are strengthened by the information that went out from this country to New Jersey 12 months ago, has at a furnace there so succeeded in perfecting his method of steel making that he can turn out a metal in any quantity 40 per cent. cheaper than English steel of a similar quality. It is added that Mr. Leighton is "able, by different heatings, under the same process to manufacture the finest and most costly, as well as the puddled steel and all intermediate grades." Simultaneously there comes information of the successful working at the mill and forge of Messrs. Pettin and Gaudet, at St. Chamond, of a furnace which is the invention of Mr. Pernot, engineer and manager of the establishment. The furnace is exciting much interest just now throughout the Belgian iron trade, as it is thought likely to solve the problem of mechanical puddling more satisfactorily than by any other method. Specimens of the furnace are expected to be put up shortly at Liege, French ironmasters and American engineers have carefully examined it at work. The furnace is employed both in the puddling and also in the open hearth process. One ton of pig-iron is charged, and it takes about two hours to make a heat. There are two doors to the furnace, both on the same side, and the only hard work the men have is in balling. The furnace is described as running easily with engines of about the same power as those used for the Danks furnaces. The quantity of coal used is 1860 lbs. per ton of iron, and 100 lbs. of African ore per ton for flux; 12 bars are made from one charge. The open-hearth furnaces at work number three, and they make five heats of 4½ tons per day. Out of a furnace which Messrs. Pettin and Gaudet are now building, and that will have a dish 9 feet in diameter, they hope to get four heats of 10 tons each. For steel it is believed that this furnace will take precedence of any before brought out.

THE COAL-CUTTING MACHINE COMPETITION.

The monthly meeting of members of the South Staffordshire and East Worcestershire Institute of Mining Engineers was held, on Monday, in the Geological Museum, Dudley.—Mr. JOHN HUGHES presiding. There were about thirty persons present, including Mr. Lindop, Mr. W. Spruce, Mr. W. Blakemore, Mr. Newey, Mr. Cole, Mr. J. Tomson, &c. The following gentlemen were elected ordinary members—Mr. J. B. Bissell, ironmaster, Great Barr; Mr. Charles Hutton, ironmaster, Wolverhampton; Mr. Jacob Forrest, Mold; Mr. J. G. Addenbrooke, coal and iron master, Darlaston; Mr. W. B. Collis, mining engineer, Stourbridge; and Mr. Samuel Griffiths, Editor of the *Iron Trade Exchange*, was elected an honorary member. Mr. Joseph Millard, coalmaster, Aldridge, was nominated as an ordinary member.

Mr. HENRY JOHNSON, jun. (the secretary) read the report of the last Council meeting, which contained the following award:—

AWARD.—The contest was between the machines of Mr. Grafton Jones, Mr. R. S. Norris, and Mr. J. E. Smith. The decision of the Council is that neither of the machines fulfilled the conditions of the premium offered by the Institute. Mr. Smith having retired from the contest, the Council decide, considering the two remaining competitors had made great exertions to produce a successful hand-machine, to divide the premium between Mr. Grafton Jones and Mr. R. S. Norris, and in doing so the Council express their thanks to each inventor, also their opinion that the machines possess the elements of success, and will only require a little more time and attention on the part of the inventors to produce an efficient machine.

Mr. HUGHES said the Leeds correspondent of the *Colliery Guardian* had spoken of South Staffordshire as having to go over ground which had been left by Yorkshire ten years ago. In 1861 there was a machine which cut, with one man, 14 yards long, 18 in. deep. If the correspondent of the *Guardian* could find the patentee the Institute could find him a job in the hard coal of South Staffordshire.—Mr. W. SPRUCE said he did not believe that the machine could do such work.

Mr. W. BLAKEMORE said he was glad to see from the award that the machines had in them the elements of success. The districts of Yorkshire and Staffordshire were very different, and the coal there was much softer. It was necessary that the latter district should have a hand coal-cutting machine, for some of the small collieries could not afford a machine for steam or compressed air. He proposed the adoption of the award.—Mr. SPRUCE seconded this, and said he picked the pit not because of the hardness of the coal, but because of its safety. He felt that Mr. Norris's patent (Manchester) was best for hard work, such as gate-roading.

After the CHAIRMAN had expressed his opinion that the large coal-cutting machines were failures, the adoption of the award was agreed to. There was no other business of public importance.

Telegram.—The South Staffordshire coalmasters have declared a reduction of 3s. per ton for best coal from Oct. 1.

THE PATENT COTTON GUNPOWDER COMPANY (LIMITED)

Can supply their SMOKELESS BLASTING MIXTURE, the most powerful and purest explosive for QUARRIES, MINES, and CLOSE HEADINGS. NO NOXIOUS GASES.

For terms, apply to the Secretary, 23, QUEEN ANNE'S GATE, WESTMINSTER. THE WORKS ARE AT FAVERSHAM, KENT.

THE TAVISTOCK IRONWORKS, ENGINEWORKS, FOUNDRY, AND HAMMER MILLS,

TAVISTOCK, DEVON.

NICHOLS MATHEWS, AND CO. ENGINEERS, BRASS AND IRON FOUNDERS, BOILER MAKERS AND SMITHS. MAKERS OF

CORNISH PUMPING, WINDING, AND STAMPING ENGINES; STEAM CAPSTANS AND CRUSHERS; WATER-WHEELS; PUMP-WORK; SHOVELS, AND HAMMERED IRON FORGINGS OF EVERY DESCRIPTION.

Also of SPUR, MORTICE, MITRE, BEVEL, and other WHEELS, of any diameter up to 12 feet, made by Scott's Patent Moulding Machine, without the aid of patterns, and with an accuracy unattainable by any other means.

MACHINERY FOR FOREIGN MINES carefully prepared. SECOND-HAND MINING MACHINERY, in good condition, always on sale at moderate prices.

TABULAR STATEMENT OF LIFE ASSURANCE COMPANIES FOR 1874.

Compiled by T. J. BUSE, 29, Page-street, Swansea. Published by Messrs. WATERLOW and SONS, London. Price 6d.; post free, 7d.

Reviewed by the *Globe*, Aug. 27; the *Mining Journal*, Aug. 29; the *London Mirror*, Aug. 15; the *Insurance Agent*, July 1; the *Bullionist*, Aug. 22; the *Daily Post*, Aug. 27; *Nottingham Guardian*.

MINES AND MINING. Now in the Press, and will shortly be issued.

SPARGO'S ANNUAL STATISTICS AND OBSERVATIONS ON THE MINES OF CORNWALL, DEVON, AND WALES.

The work will contain particulars of all the important mines in the counties referred to, and will be illustrated by maps and sections of the various districts forming a complete Guide to Mining Investors.

Price 3s. 6d.; by post 3s. 8d. To secure an early copy subscribers are requested to forward their application as early as possible. Only a limited number will be issued. Queen's Buildings, Queen Victoria-street, Mansion House, London, E.C. Messrs. WERTHEIMER and LEZ, 156, Finsbury Circus, London, E.C.

In Chancery.

RAMSBOTTOM v. MORRELL.

GLOUCESTERSHIRE, IN THE FOREST OF DEAN.

TWO VALUABLE COLLIERIES, known as the RISING SUN ENGINE COLLIERY (FREEHOLD), and UNION COLLIERY (LEASEHOLD), extending together over about 820 acres, and comprising SEVERAL VALUABLE SEAMS OF COAL, with good railway accommodation.

The property is situated about three miles from Coleford, and four from Lydney, covered by the Bixslado and Dark Hill Valleys, and is on the Severn and Wye Railway, connecting Lydney on the Bristol Channel, with Lydbrook on the Ross and Monmouth line, a branch of which line, expected to be completed this year, runs through the property.

These collieries are well worthy the attention of coalowners and enterprising colliers, as shafts can be opened without any unusual expense, and with the certainty of finding coal, obviating the risk commonly attendant on the opening of new collieries.

MESSRS. DANIEL SMITH, SON, AND OAKLEY have received instructions to OFFER the above VALUABLE PROPERTIES FOR SALE, BY AUCTION, at the Mart, Tokenhouse-yard, E.C., on Wednesday, September 30th, at One o'clock precisely, by order of the Master of the Rolls, to whose Court this cause is attached, in Two Lots.

Lot 1 will comprise the RISING SUN ENGINE COLLIERY, 200 acres; and Lot 2 the UNION COLLIERY, 320 acres.

Particulars and plans may shortly be obtained of Messrs. PRIOR, BIGG, CHURCH, and ADAMS, Solicitors, 61, Lincoln's Inn Fields, W.C.; of Messrs. GRAHAM and SOX, Solicitors, Abingdon, Berks; of MARCUS W. T. SCOTT, Esq., 4, Westminster Chambers, Victoria street; at the Bell Hotel, Gloucester; at the Mart; and of the Auctioneers, 10, Waterloo-place, Pall Mall, S.W.

MINE MACHINERY, MATERIALS, &c., FOR SALE.

AT THE WEST CUMBERLAND MINE, CALDBECK, CUMBERLAND.

MR. JACKSON, Auctioneer, has been instructed to SELL, BY AUCTION, on the 7th day of October next, at Eleven A.M., at the West Cumberland Mine, the WHOLE of the

MACHINERY, MATERIALS, &c., viz.:-

- ONE Blake's STONE BREAKER, 15 ft. by 9 ft., new.
- IRON WORK for one water wheel, 24 in. diameter.
- ONE WATER WHEEL, 20 in. diameter, new; pitch pine framework for carrying the same, new.
- ONE 6 heads of STAMPS.
- ONE 6 heads of STAMPS.
- ONE CIRCULAR SAW FRAME, 2 saws, shafting belts, &c.
- ONE FAN, new, belt drums.
- FOUR small WATER WHEELS.
- FOUR rotating SLIME BUDDLES, frames, trunks, &c.
- 15 tons T rails, 35 lbs. per yard.
- 30 tons bridge rails, 18 lbs. per yard.
- 6 large iron wagons.
- 3 small ditto.
- 1 skip; 15 fms. skip road.
- 2 sheaves for ditto.
- 2 water balance wagons.
- 1 elstern for ditto.
- 60 fms. galvanised wire rope, 78 in. diameter.
- 16 fms. 1/2 in. proof chain, new.
- 34 fms. cast iron air pipes, 4 in.
- 85 fms. zinc air pipes, 4 in.
- 1 crab winch, double purchase.
- Lot of winze kibbles, shaft tackle, small chain, &c.
- 4 9 ft. 6 in. pumps.
- Door and doorpieces, &c.
- Smiths' tools—2 pairs of bellows, anvils, vices.
- 1 Pooley's weighing machine, 10 cwt.
- Quantity of steel, new; iron, new.
- Miners' tools.
- Quantity of old iron; old scrap.
- Quantity of new pitch pine, yellow pine, and other timber.
- Quantity of large culvert pipes, 18 in.
- Miners' dial; levelling staff, &c.

MESSRS. DAVEY AND THOMAS, Auctioneers, Redruth, have been favoured with instructions to SELL, BY PUBLIC AUCTION, at Treleigh Wood United Mines, near Old Tolgus Mine, Redruth, on Thursday, the 24th September, 1874, at Eleven o'clock in the forenoon precisely, the following VERY VALUABLE

MACHINERY AND MATERIALS, viz.:-

- ONE 50 in. cylinder PUMPING ENGINE, 10 ft. in cylinder, and 7 1/2 ft. in shaft; with first piece of rod and caps.
- ONE nearly new 11 ton BOILER, with fittings, complete.
- ONE excellent BALANCE BOB.
- ONE 60 ft. SHEARS, shives, and brasses.
- ONE 10 arm CAPSTAN, with oak axle.
- ONE HORSE WHIM.
- 1 12 in. plunger pole, with stockings, complete.
- 1 9 in. ditto ditto.
- 50 fms. 12 in. main rods, complete.
- 35 fms. 13 in. pumps.
- 15 fms. 9 in. ditto.
- 12 in. H piece; doorpiece; pole case; stuffing box, glands, & windhole.
- 9 in. plunger pole, stuffing box and glands, complete.
- 9 in. H piece, door piece, and door, complete.
- 1 V bob, complete.
- Strapping plates, rod, flanch pins, and bolts.
- Bucket rods, staples and glands.
- A quantity of chain.
- About 100 fms. iron stove ladders.
- Old cast and wrought iron.
- Smiths' tools.
- A quantity of new and useful timber.

The above machinery and materials are nearly new, and of the best description, and will be sold in lots to suit the convenience of purchasers. Luncheon at Eleven. Sale to commence at Twelve o'clock precisely. To view, apply to Captain JAMES BROWN; and, for further particulars, apply to the Auctioneers, Redruth.—Dated Redruth, Sept. 8, 1874.

EXTENSIVE PUBLIC SALE OF ENGINEERS' TOOLS, &c., IN SEPARATE LOTS.

THERE WILL BE EXPOSED FOR SALE, at Saint Leonard's Engineering Works, Perth, lately occupied by Messrs. C. D. YOUNG and COMPANY, Engineers, Boiler Makers, and Contractors, an EXTENSIVE and VALUABLE ASSORTMENT OF

ENGINEERS' TOOLS, PLANT, UTENSILS, &c.,

on Thursday, 24th, and Friday, 25th September next, including a great variety of self-acting lathes of various descriptions, self-acting screwing cutlins, lathes, slotting machines, shaping machines, nut shaping machines, doubled geared vertical drilling machines, radial vertical drilling machines (by V. and A. Harvey) steel roller riveting machine (by Cook), punching and shearing machines, plate bending machines, four upright boilers, buffing machine, steam hammers, crab winches (double and single power), lift cranes; smithy and other tools, including vices, vice benches, anvils, tongs, cresces, fanners, troughs, &c.; fixed steelyard and movable steelyards, wrought iron rack, Weston's differential pulley blocks, Denison's patent weighing machine, screws jacks, steel turning tools and chisels, leather belting, shafting, gas pipes and brackets, grindstones and troughs, saw bench, boiler makers' plate furnace and side blocks, also a large quantity of service rails, bogies, patterns, castings, together with a general engineer's stock of utensils, &c.; and also office furniture, including two writing desks and two large maps, drawing tables, and drawing instruments, &c.

The tools are modern, of the best construction, and by the best makers, including Messrs. Macleod and Marsh; Messrs. Buckton and Co.; Messrs. D. Cook and Co.; Jule and others.

The tools may be inspected at the premises, and copies of the catalogue may be had from ALEXANDER WILSON, solicitor, Perth; WILLIAM STIVEN, accountant, Dundee; or ROBERT MTEAR, Auctioneer, Glasgow.

Sale to commence each day at Eleven o'clock forenoon prompt.

TO BE SOLD, pursuant to an Order of the High Court of Chancery, made in a Cause Belaney v. Pfrren on the 14th day of February, 1874, and with the approbation of the Vice-Chancellor Sir JAMES BACON, by Mr. SNAPE, at the Lion House, Wrexham, in the county of Denbigh, on Friday, the 19th day of September, 1874, at Four o'clock in the afternoon, in Three Lots, certain

FREEHOLD PREMISES AND MINERALS,

Situate in and near WREXHAM aforesaid.

Lot 1 being a FREEHOLD MESSUAGE or DWELLING HOUSE, with the appurtenances, situate on the east side of Hope-street, Wrexham, formerly known as the Wrexham Club House, now in the occupation of Messrs. Simms as yearly tenants.

Lot 2 being FOUR SEVERAL PLOTS, PIECES, or PARCELS OF FREEHOLD LAND, containing 1347 square yards or thereabouts, abutting on Hill-street and Regent-street, in Wrexham, now in the occupation of Mr. Hugh Davies, builder, his under tenants or assigns held by said Mr. Hugh Davies, under a lease dated the 30th day of April, 1857, for a term of 99 years, from the 25th day of March, 1854, at a ground rent of £22 5s. per annum, which will be payable to the purchaser. These premises are sold subject to the said lease, and the purchaser will be entitled to the rack rental of the premises on the expiration of the said term; and

Lot 3 being the MINERALS lying under the PENTRE-FRAN FARM, comprising a mineral area of 31 acres (little more or less), the farm being in the occupation of Mr. Edward Boynton as a yearly tenant at the rent of £60. This farm lies to the west of Wrexham, and about four miles distant therefrom.

Particulars and conditions of sale can be obtained (gratis) in London from Messrs. WARD, MILLS, WITHAM, and LAMBERT, 1, Gray's Inn-square, W.C.; and Messrs. BENHAM and NICHOLSON, 25, College Hill, Cannon-street, E.C.; and in the country from Mr. JAMES O'BRYEN, Central Chambers, 17A, South Castle-street, Liverpool; and from Mr. SNAPE, the Auctioneer, Lion House, Wrexham.

EDWARD BLOXAM, Chief Clerk.

Dated this 7th day of August, 1874.

FOR SALE.

LEAD MINING PROPERTY FOR SALE, BY PRIVATE TREATY. This property is situate on the HALKYN MOUNTAIN, FLINTSHIRE, and is in close proximity to the Prince Patrick and South Prince Patrick Mines.

Several valuable lead lodes are known to traverse the sett, from which large returns have been made at a good profit. No steam power is required.

Applications for the same to be made to Messrs. R. EVANS and Co., Flint; or to Capt. S. HARPER, Halkyn, Holywell.

PIT SINKING AND WINDING COAL.

FOR SALE, and ready for immediate delivery, a 14, 18, 25, and 35 horse power PORTABLE STEAM ENGINES, with link motion, reversing gear, winding drum, gear, &c., complete.

Also, a 9 and 12 horse power VERTICAL ENGINES, with link motion reversing gear, suitable for mining operations.

FOR SALE, an excellent PORTABLE STEAM ENGINE; and a 7-ft. PAN MORTAR MILL. Apply to—

BARROWS AND STEWARTS, ENGINEERS, SANBURY.

PEMBROKESHIRE.—PARISH OF LOVESTON.

VALUABLE FREEHOLD MINERAL ESTATES FOR SALE.

MESSRS. GOODE AND OWEN have been favoured by instructions to OFFER FOR SALE, BY PUBLIC AUCTION, on Tuesday, the 15th day of September, 1874, at the White Lion Hotel, Tenby, at One o'clock precisely, first in One Lot, and then if not sold in Four Lots, the undermentioned IMPORTANT FREEHOLD MINERAL PROPERTY:—

Lot 1.—The desirable FARMS OF GREAT LOVESTON and HUNGERFORD, held under lease by Mr. Henry John, containing by admeasurement 269A. 1R. 14P. or thereabouts.

Lot 2.—The excellent CORN GRIST MILL, called Loveston Mill, with comfortable DWELLING HOUSE (all in substantial repair), and 8A. 2R. 38P. of good MEADOW and PASTURE LAND, held by Mr. John Beddoes under a lease for the unexpired term of eight years.

Lot 3.—The valuable FARM OF MOORE, in the occupation of Mr. Thomas Griffiths, as tenant from year to year, containing 129A. 3R. 7P. of good PASTURE and ARABLE LAND.

Lot 4.—The compact FARM OF LITTLE LOVESTON, in the occupation of Mr. Josiah Beynon, as tenant from year to year, containing by admeasurement 46A. 3R. 26P., or thereabouts.

The above property is situated upon the great mineral basin so celebrated for its anthracite coal fields and ironstone, and lies within easy distance of a shipping port at Cresswell Quay on the one side, and railway communication on the other. The main roads of the country intersect the farms.

Plans and particulars are in course of preparation, and may be obtained at the offices of Messrs. GROVYNE and STOKES, Solicitors, Tenby; or of Messrs. GOODE and OWEN, Estate Agents and Valuers, Haverfordwest.

IMPORTANT SALE OF PLANT AND MACHINERY, AND OTHER EFFECTS, AT THE BRITISH OIL WORKS, SALTNEY, NEAR CHESTER.

MESSRS. CHURTON, ELPHICK, AND CO. beg to announce that they have been favoured with instructions from Messrs. E. S. Rogers and Co., TO SELL, BY AUCTION, without reserve, on Wednesday, Sept. 16th, 1874, commencing at Twelve o'clock noon punctually, the WHOLE of the

VALUABLE PLANT AND MACHINERY,

Including several large cast and wrought iron and wood store receiving and bleaching tanks; cast iron pan, to hold 2 tons; melting pan; 30 cwt. iron jacketed pan and fittings; cast iron 45 barrel still, with worm and tank; wagon boiler still, separator, wrought iron agitators; brass force pump and fittings; iron pumps with eccentric rods; tin pumps; cast iron well; wood tank for steaming barrels; a large assortment of oil and grease cans; drum barrels; a very valuable horizontal high-pressure STEAM ENGINE, 12 in. cylinder, 2 1/2 ft. stroke, with reversible lever and fittings, by George Rennie and Co., Glasgow; driving straps; large Cornish BOILER, 20 ft. long by 5 ft. 10 in. in diameter, with fittings complete; superheater; two weighing machines; quantity of cast-iron piping, and fittings; iron shafting and pulleys; hand screw paraffin press, complete; tool chest, with stocks and dyes; coopers' tools; iron and wood trolleys; wheelbarrows; T iron for roofing; iron tramway; quantity of lamp black, pitch and cement; wood stages and ladders; the contents of the blacksmiths' shop, and other miscellaneous effects.

N.B.—Catalogues may be had at the offices of the Auctioneers, Chester; and Whitechapel, Salop.

THE WHITEWELL LEAD MINING COMPANY

(LIMITED).

IMPORTANT SALE OF THE ENTIRE PLANT.

THURSDAY, SEPTEMBER 17TH, 1874.

MESSRS. WATSON AND SON have the honour to announce that they are instructed to SELL, BY AUCTION, at the works of the Whitewell Lead Mining Company (Limited), near Clitheroe, Lancashire (in consequence of the company relinquishing their operations), on Thursday, the 17th day of September, 1874, commencing at Ten for Eleven o'clock prompt, the entire

MINING PLANT.

Which will be found to include FOUR IRON DWELLING-HOUSES, WATER WHEELS, WATER PRESSURE HOISTING and PUMPING ENGINES, CRUSHING MILLS, large elstern, chiefly by Whittaker, of Walton-le-Dale; wrought and cast-iron pipes; about 20 tons of tram metals and sleepers; iron wagons; double purchase winch; double-blast smiths' bellows; a varied assortment of smiths' tools, anvils, tongs, ironers, miners' hammers, picks, drills, spades, jiggers, bunnies, washing tools, and a large number of other articles associated with mining pursuits; also a quantity of office fixtures, including capital iron safe, copying press, &c.; horse gears, hay cutter, provender chests, &c., &c.

The Whitewell Mine is situated fourteen miles from Clitheroe, 14 miles from Longridge, and 21 miles from Preston.

Catalogues may be obtained on application to the Auctioneers, North Lancashire Auction Mart, Fishergate, Preston, on enclosing a postage stamp.

Mr. Harding, of Preston, will run a 'Bus to the place of sale on the day of auction, leaving Mr. Tate's, the Anglers' Inn, Poole-street, Preston, at 6.30 A.M. Fares to place of sale and back, 4s. each. To Whitewell only and back, 3s. each.

Seats must be secured the day before the sale.

VALUABLE MINING PROPERTY IN THE

ISLE OF MAN.

IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867;

AND OF THE

GREAT MONA MINING COMPANY (LIMITED).

MR. J. LEES WILL SELL at the Mitre Hotel, Cathedral Yard, Manchester, on Thursday, the 17th day of September, 1874 instant, at Six o'clock prompt, subject to the conditions of sale to be then produced, all the

ESTATE, RIGHT, TITLE, AND INTEREST

Whatsoever of the liquidators in the above matter, in all the LEASES of the MINES, VEINS, and BEDS of METALS and METALLIC ORES and MINERALS within, under, or upon all those several tracts of land, situate in the parish of Manxloch, containing 300 acres, 72 acres, and 780 acres, or thereabouts, respectively, and which are now called or known by the name of the GREAT MONA MINE, together with the OFFICES and OTHER BUILDINGS erected thereon, and the large water-wheel, with necessary pumps, drawing machinery, plant, and other effects belonging to the said mine, and which have been used for the purpose of working such mine.

The same will be sold subject to the payment and observance of the royalties, rents, sums of money, and of the covenants and conditions mentioned and contained in certain indentures of lease (which are each held for the term of 21 years from the date thereof respectively), dated the 20th December, 1865, the 10th June, 1869, and the 14th February, 1866, and on the lessee's part to be paid, observed, and performed. The leases may be seen on application to the undersigned, CHARLES KEARSELEY.

A large amount of capital has been expended in opening out the property. Several lodes have been opened out on the sets.

The mine has been inspected and favourably reported by Capt. Paul, Nancarrow, J. Kitto, W. Kitto, R. Rowe, and several other engineers of high standing.

For further particulars, apply to the Auctioneer, 58, London Wall, London, E.C.; or to Mr. CHARLES KEARSELEY, Solicitor, 26, Brazennose street, Manchester.

SOUTH AUSTRALIA.

EXTENSIVE AND VALUABLE COPPER MINES, KNOWN AS THE

"BLINMAN" AND "YUDANAMUTANA," situate about

120 miles from Port Augusta.

BY ORDER OF THE TRUSTEES FOR THE DEBENTURE HOLDERS.

MESSRS. BROAD, PRITCHARD, AND WILTSHIRE have been favoured with instructions to SUBMIT, BY AUCTION, at the Mart, Tokenhouse-yard, E.C., on Tuesday, September 29th, at One o'clock precisely, in One or Two Lots, the very EXTENSIVE and VALUABLE COPPER MINES, situate in SOUTH AUSTRALIA, about 120 miles from Port Augusta, and known respectively as

"BLINMAN" AND "YUDANAMUTANA."

Comprising about 1100 acres, together with the engine-floors, houses, smelting-works, and all the fixed plant at present thereon.

Maps and plans of the properties, with reports of mining engineers, may be inspected at the late offices of the company, 60, Cannon-street, E.C.; and particulars and conditions of sale may be obtained at the Mart; of Messrs. PATTERSON, WIGG, GURNEY, and KING, Solicitors, 50, Lombard-street, E.C.; or of the Auctioneers, 7, Queen-street, Cheapside, E.C.

TO ZINC SMELTERS, CAPITALISTS, AND SPECULATORS.

TO BE SOLD, a bargain to an immediate purchaser, for £5000 (lowest price), one of the finest ZINC MINING PROPERTIES in EUROPE, situated in the PICOS DE EUROPA, province of SANTANDER, SPAIN, comprising FIVE MINES, having a superficial area of 368,000 square metres.

The mineral is abundant, of excellent quality; the calamine, when calcined, yields 60 per cent. of metallic zinc, and the lead, which is found in considerable quantities, yields 75 per cent. A road has been made to the mines by the proprietors at a cost of 50,000 fr., and there is a good house, workmen's cottages, blacksmiths' shop, stable, &c., which together cost 15,000 fr.; also THIRTY ACRES of good FREEHOLD LAND.

The titles are a direct Government concession, free of all royalties, to purchaser for ever. A good shipping port in within easy distance, and labour is cheap and abundant. With spirited working under judicious management this property is capable of producing a net profit of at least £10,000 a year. Immediate possession given.

Address, Mr. Woods, Santander, Spain.

TO CAPITALISTS.

FOR SALE, IN NEW SOUTH WALES, —

1340 ACRES TIN LANDS, Lode and Stream.

2430 ACRES COPPER LANDS (portions freehold).

2112 ACRES IRON AND COAL.

2250 ACRES COAL (on sea coast).

4000 ACRES COAL (inland, on railway line).

200 ACRES KEROSENE SHALE.

200 ACRES PLUMBAGO.

105 ACRES FREEHOLD GOLD DEPOSIT (Brown's Creek).

The above properties are all first-class, and on or near railway lines or water carriage, and are the very "pick" of their respective districts (being some of the first selections made).

Liberal terms, either as to purchase or working on royalty, will be given to parties able to carry out arrangements.

Apply to the owner,—

CHARLES W. WEEKES, Circular Quay, Sydney, N.S.W.

THE GEM TIN MINING COMPANY (LIMITED).

THE LIQUIDATOR of the ABOVE-NAMED COMPANY, with the concurrence of the parties claiming a lien on the property, now INVITES TENDERS for the PURCHASE of the WHOLE of the PROPERTY belonging to the said company, comprising the COMPANY'S INTEREST in the LEASE of the MINE, known as

THE GEM TIN MINE,

in the parish of WHITCHURCH, in the county of CORNWALL. The mine has been extensively opened, and is complete with all necessary machinery, one great advantage being the whole worked by water-power, and the cost of steam machinery saved.

The whole will be sold as a going concern, free from any lien or incumbrance. The PLANT consists of WATER-WHEELS, pitwood, and fittings in the shafts and levels, STAMPING and DRESSING MACHINERY, wagons, tramroads, and all necessary appliances, tools, &c., for carrying on an extensive mine.

Tenders to be sent to the Liquidator, as below, on or before the 26th day of September, 1874.

Permission to inspect the mine, full inventory of plant, and all particulars and conditions of sale to be obtained of—

MR. FREDERICK WARWICK, Liquidator,

25, Bucklersbury, London, E.C.

IMPORTANT AND VALUABLE SLATE AND SLAB QUARRY

FOR SALE.

TO BE SOLD, BY TENDER, all that very valuable SLATE and SLAB QUARRY, known as the

TEMPLE DRUID QUARRY,

Together with the MANSION HOUSE of TEMPLE DRUID, and about FIFTY ACRES of RICH MEADOW LAND, situate in the parish of MAENLOCHOG, in the county of PEMBROKE, and now in the hands of the proprietor.

The house is delightfully situated, and contains drawing, dining, and breakfast rooms, four best and three servants' bed rooms, dairy, brew-house, good kitchen and underground cellars, and w.c.

The out premises, which have recently been put in thorough repair, comprise a three-stall stable, loose box, saddle room, and cow house. There is an unfailing supply of hard and soft water. A large extent of woodcock, snipe, and rough shooting, together with excellent fishing, may be rented. Two packs of hounds hunt the neighbourhood.

Temple Druid is about six miles from the Narberth Road and Clarboston Station on the Great Western Railway, and within ten minutes walk of the proposed station at the village of Maenlochog, on the Narberth Road and Maenlochog Railway, now in course of construction.

Tenders to be sent to Messrs. DAVIES and Co., Solicitors, Haverfordwest, on or before the 1st day of October next, and of whom the Engineer's Report on the quarry may be obtained.

Spring-gardens, Haverfordwest, August, 1874.

MACHINERY AND MINE MATERIALS.

FOR SALE.—

- A 50 inch Cornish PUMPING ENGINE, new.
- A 30 inch ditto ditto, with BOILER, nearly new.
- A 2 1/2 horse power SEMI-PORTABLE ENGINE, on stand plate.
- A large quantity of PITWORK and OTHER MINING MATERIAL.

Apply to— W. TREGAT, REDRUTH.

CORNISH PUMPING ENGINES.

FOR SALE, a very good second-hand 50 in. cylinder PUMPING ENGINE, 10 ft. stroke, with TWO CORNISH BOILERS and FITTINGS, 11 tons each; condensing water equal to new.

Also TWO very good 36 in. cylinder PUMPING ENGINES, with or without BOILERS.

Apply to F. W. MICHELL and Co., East Carn Brea, Redruth, Cornwall.

FOR SALE.—ONE 50 in. cylinder PUMPING ENGINE, 10 ft. stroke in cylinder, 8 ft. in shaft, with ONE BOILER.

ONE 24 in. cylinder WINDING ENGINE, 8 ft. stroke, ONE BOILER and DRAWING CAGE complete.

Apply to Mr. WILLIAM LANGDON, Northumberland Foundry, Launceston, Cornwall.

FOR SALE.—a 40 inch PUMPING ENGINE, with first piece of MAIN ROD.

For particulars and price, apply to Mr. JOHN WILLIAMS, Mercer, &c., Camborne, Cornwall.

MINING MACHINERY.

MESSRS. F. W. MICHELL AND CO. have FOR SALE several CORNISH PUMPING, STAMPING, and WINDING ENGINES, of different sizes; BOILERS from 6 to 12 tons each; PITWORK of all sizes; CORNISH CRUSHERS; STAMP AXLES; IRON PLAT-RODS; STRAPPING PLATES; and other MATERIALS in general use in Mines, &c.

EAST CARN BREA, REDRUTH, CORNWALL.

ROYAL SCHOOL OF MINES.

DEPARTMENT OF SCIENCE AND ART.

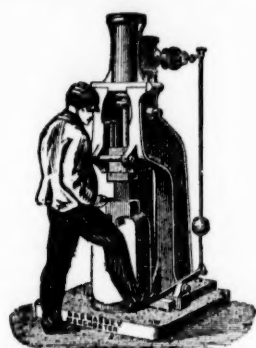
During the TWENTY-FOURTH SESSION, 1874-75, which will commence on the 1st of October, the following COURSES OF LECTURES and PRACTICAL DEMONSTRATIONS will be given:—

- | | |
|----------------------|--------------------------------------|
| 1.—CHEMISTRY | By E. FRANKLAND, Ph.D., F.R.S. |
| 2.—METALLURGY | By JOHN PERCY, M.D., F.R.S. |
| 3.—NATURAL HISTORY | By T. H. HUXLEY, LL.D., F.R.S. |
| 4.—MINERALOGY | By WASHINGTON W. SMYTH, M.A., F.R.S. |
| 5.—MINING | —Chairman. |
| 6.—GEOLOGY | By A. C. RAMSAY, LL.D., F.R.S. |
| 7.—APPLIED MECHANICS | By T. M. GOODEVE, M.A. |
| 8.—PHYSICS | By FREDERICK GUTHRIE, Ph.D., F.R.S. |

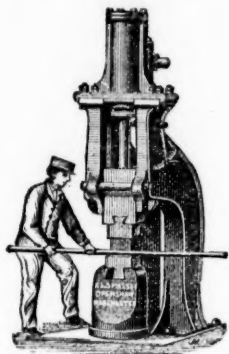
B. & S. MASSEY, OPENSHAW, MANCHESTER.

PRIZE MEDALS AWARDED:—Paris, 1867 Havre, 1868; Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873.

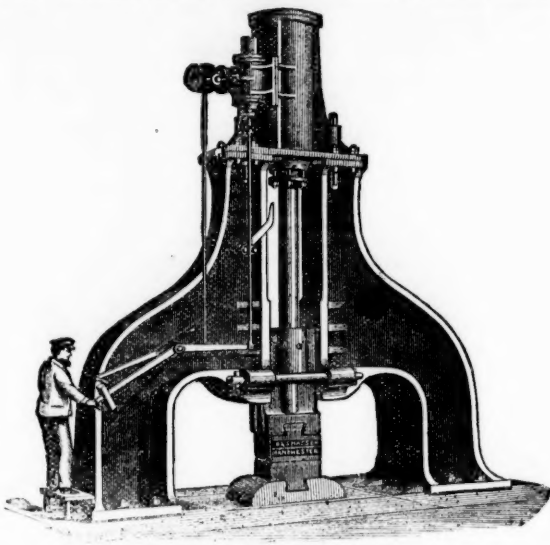
Patentees and Makers of Double and Single-acting STEAM HAMMERS of all sizes, from $\frac{1}{2}$ cwt. to 20 tons, with self-acting or hand motions, in either case giving a perfectly DEAD BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers, working up to 500 blows per minute, in some cases being worked by the Foot of the Smith, and not requiring any separate Driver.



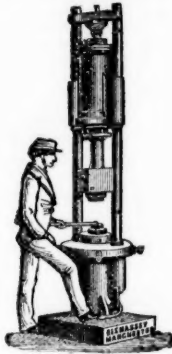
Small Hammer with Foot Motion.



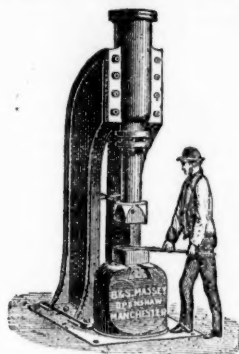
General Smithy Hammer.



Steam Hammer for Heavy Forging.



Special Steam Stamp.



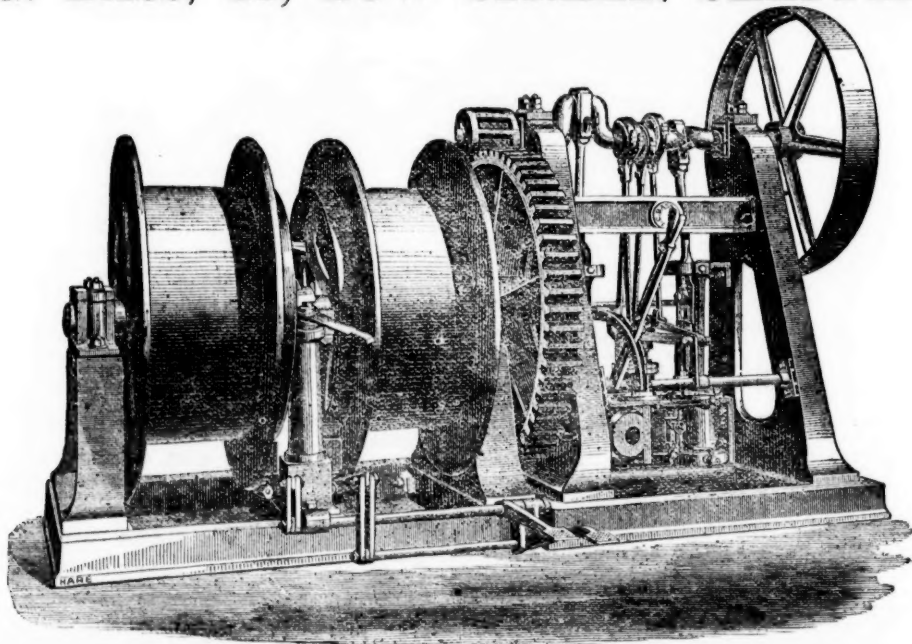
General Smithy Hammer.

From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

SPECIAL STEAM STAMPS, of great importance for Forging, Stamping, Punching, Bolt-making, Bending, &c. STEAM HAMMERS for Engineers, Machinists, Ship-builders, Steel Tilters, Millwrights, Copper-smiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for Use in Repairing Smithies of Mills and Works of all kinds; for straightening Bars, bending Cranks, breaking Pig-iron, &c.

ROBERT DAGGLISH & CO.,
Boiler Makers, Engineers and Ironfounders, &c.,
ST. HELEN'S FOUNDRY, LANCASHIRE,
MANUFACTURERS OF
ROBERTSON'S PATENT
VALVELESS ENGINES, AIR-COMPRESSORS FOR COLLIERIES AND PUMPS,
With and without Condensing Apparatus.
CHEMICAL PLANT OF EVERY DESCRIPTION.
ROLLING MILL ENGINES, GEARING, &c.,
GLASS MACHINERY.
MINING MACHINERY FOR COPPER, COAL, GOLD, AND SALT.

I. G. BASS, 18, BOW STREET, SHEFFIELD.

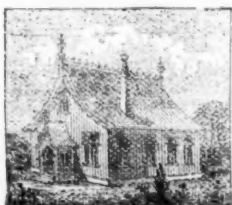


IMPROVED DESIGN of Engine for HAULING, for use with either Steam or Compressed Air.

Takes less room, and can be supplied for less money, than any other Engine of same power.

May also be had with single drum for winding.

IRON BUILDINGS, IRON ROOFINGS, &c.

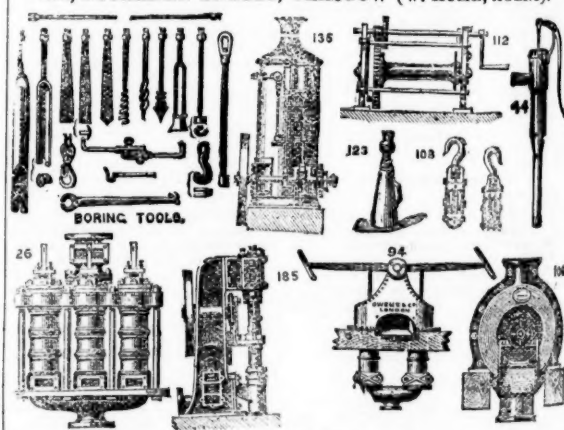


ISAAC DIXON,
HATTON GARDEN, LIVERPOOL.
MANUFACTURERS of IRON BUILDINGS of every description, including WORKMEN'S COTTAGES, STORES, WAREHOUSES, WORKSHOPS, &c., &c.
Also, GALVANISED CORRUGATED IRON ROOFING, for MINING, COLLIERY, RAILWAY, and GENERAL PURPOSES.
WORKMEN'S COTTAGES erected in blocks at very low prices.
WROUGHT IRON TANKS.

I. D.'s IRON HOUSES and IRON ROOFS are ECONOMICAL, DURABLE, QUICKLY ERECTED, and REMOVABLE WITHOUT INJURY.

DRAWINGS AND ESTIMATES ON APPLICATION.

S. OWENS AND CO.,
Hydraulic and General Engineers,
WHITEFRIARS STREET, FLEET STREET, LONDON
AND AT
195, BUCHANAN STREET, GLASGOW (W. HUME, AGENT).



MANUFACTURERS OF
BORING TOOLS, for testing ground for Minerals. Bridge foundations, Artesian Wells, &c., to any depth.
No. 26.—Treble Barrel and other Deep Well Pumps.
No. 136.—Vertical and other Portable Steam Engines.
No. 185.—Horizontal and Vertical Steam Pumping Engines.
No. 112.—Single and Double-purchase Crab Winches.
No. 108.—Pulley Blocks of all sizes.
No. 123.—Bottle and other Lifting Jacks.
No. 94.—Double-barrel Pumps, for Mine or Quarry use.
No. 44.—Portable Wrought-iron Pumps, ditto ditto.
No. 102.—Bernay's Patent Centrifugal Pumps, of all sizes.

ALSO EVERY OTHER DESCRIPTION OF
HYDRAULIC AND GENERAL MACHINERY,
COMPRISING

TURBINES, WATER WHEELS, WIND ENGINES,
THE HYDRAULIC RAM, FIRE ENGINES, &c.
Catalogues and Estimates on application.

MONEY, TIME, AND LIFE
ARE LOST IN THE EVENT OF
ACCIDENTAL INJURY OR DEATH.
Provide against these losses by a Policy of the
RAILWAY PASSENGERS' ASSURANCE COMPANY
AGAINST ACCIDENTS OF ALL KINDS.
THE OLDEST AND LARGEST ACCIDENTAL ASSURANCE COMPANY.
HON. A. KINNAIRD, M.P., Chairman.
PAID-UP CAPITAL AND RESERVE FUND £140,000.
ANNUAL INCOME, £160,000.
£810,000 have been paid as compensation.
Bonus allowed to Insurers of Five Years' standing.
Apply to the Clerks at the Railway Stations, to the Local Agents, or—
64, CORNHILL, and 10, REGENT STREET, LONDON.
WILLIAM J. VIAN, Secretary.

THE DARLINGTON ROCK BORER.

PATENTED IN GREAT BRITAIN, PRUSSIA, FRANCE,
AND VARIOUS CONTINENTAL COUNTRIES.

Makes 300 to 1000 Blows per Minute, as may be required, without
Valve or Complicated Gear.

DRIVEN WITH STEAM OR COMPRESSED AIR.
SPECIALLY SUITABLE FOR RAILWAY, QUARRY, AND MINE WORK.

For price and particulars, apply to—

JOHN DARLINGTON,
2, COLEMAN STREET BUILDINGS, MOORGATE STREET, LONDON.

DUNN'S ROCK DRILL,

For Driving Bed-Rock Tunnels, Sinking Shafts, and
Performing Open-Field Operations,

IS THE

Cheapest, Simplest, Strongest, and most Effective Drill in the World.

Office: 193, GOSWELL ROAD (near Spencer-street),
CLERKENWELL, LONDON, E.C.

THE "CRANSTON" ROCK DRILL,

Suitable for QUARRYING and OPEN-CUTTING, SINKING SHAFTS, SUBMARINE BLASTING, TUNNELLING, DRIVING
ADITS, &c., is now in successful operation in various parts of the World.

Has over SEVEN HUNDRED STROKES PER MINUTE, with a blow of 200 lbs. each stroke.

BORES GRANITE 12 inches per minute.

STEAM BOILERS; AIR COMPRESSORS; BLOWING, PUMPING, WINDING, and all other MINING MACHINERY supplied.

BEST IRON and FLEXIBLE TUBING supplied at lowest rates.

For prices, estimates, and other particulars, apply to—

J. G. CRANSTON, PATENTEE, 22, GREY STREET,
NEWCASTLE-ON-TYNE.

MINING MACHINERY AND TOOLS.

THE TUCKINGMILL FOUNDRY COMPANY,

85, GRACECHURCH STREET, LONDON, E.C. WORKS: TUCKINGMILL.

MANUFACTURERS of every description of MINING MACHINERY,
TOOLS, MILLWORK, PUMPING, WINDING, & STAMPING ENGINES.

SOLE MAKERS OF

BORLASE'S PATENT ORE-DRESSING MACHINES AND PULVERISERS.

PRICE LISTS CAN BE HAD ON APPLICATION, AND

SPECIAL QUOTATIONS WILL BE GIVEN UPON INDENTS AND SPECIFICATIONS.

TUCKINGMILL FOUNDRY AND ROSEWORTHY HAMMER MILLS.

TUCKINGMILL, CORNWALL, AND 85, GRACECHURCH STREET, LONDON, E.C.

FRANCIS MORTON & CO., LIMITED, LIVERPOOL,

Manufacture, in Galvanised and Corrugated Iron,

IRON ROOFS, IRON BUILDINGS, IRON SHEDS,

Which they have extensively supplied and erected for mining requirements at home and abroad.

ESTIMATES FURNISHED ON RECEIPT OF PARTICULARS.

**F. M. & CO.'S PATENT IRON ROOFING TILES OR SLATES ARE IN
SPECIAL FAVOUR FOR TEMPORARY COVERING,**

They require considerably less framework to carry them than ordinary slates or tiles.

ILLUSTRATED CATALOGUE ON APPLICATION.

London Office, 1, DELAHAY STREET, Westminster,
FIRST DOOR OUT OF GREAT GEORGE STREET.

MACHINERY FOR DRAINING, WINDING, AND PIT VENTILATION.

PUMPS, WAGONS, AND SMALL VENTILATORS FOR HAND USE.

MACHINERY DRIVEN BY COMPRESSED AIR,

FOR UNDERGROUND DRAINING, WINDING, HOLING, AND ROCK-DRILLING PURPOSES.

**MACHINERY FOR COAL-SORTING, LOADING, AND DRESSING, AND
ALL PLANT FOR COKE-MAKING.**

COMPLETE DRESSING PLANTS FOR ORES,

As also SINGLE MACHINES for this purpose.

MACHINERY FOR PUDDLING-WORKS, IRON, ZINC, ETC.

ROLLING MILLS are furnished as a speciality since 1857, by the

Humboldt Engine-works, in Kalk, near Deutz-on-the-Rhine.

N.B.—SINGLE MACHINES AND APPARATUS TO PRICES-CURRENT ARE ALWAYS KEPT IN STOCK.

**ENGINEERS' TOOLS, LATHES, DRILLING MACHINES, LIFTING JACKS,
HOISTING CRABS, HORIZONTAL STEAM ENGINES, &c., IN STOCK.**

W. H. PEARSON, 50, ANN STREET, BIRMINGHAM.

Catalogues

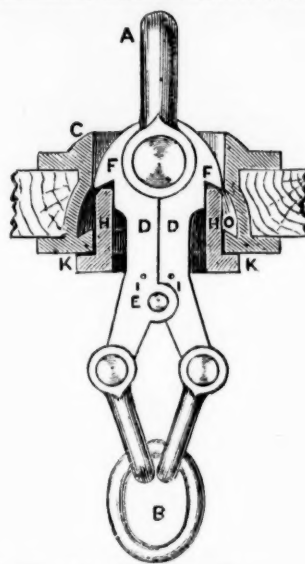


on application.

OVERWINDING IMPOSSIBLE.

WALKER'S DETACHING HOOK,

FOR COLLIERIES AND BLAST-FURNACE HOISTS.



The Newcastle Chronicle, July 26th, 1874:—

"Although Walker's Detaching Hook has only been recently invented, it has already been adopted at the Cambria Colliery, in Northumberland, by Mr. G. B. Foster; at the Kilton, Stanghew, Slopewath, and Liverton Mines, in Cleveland; and it is about to be introduced by Messrs. Bell Brothers, J. W. Pease and Partners, Bolckow, Vaughan, and Co., and Swan, Coats, and Co. The value and importance of this invention are undoubtedly such as ought to secure its universal adoption."

Full particulars may be obtained from the manufacturers,—

THOMAS WALKER & SON,
58, OXFORD STREET, BIRMINGHAM.

Engineer's Office, Upleatham, Marske-by-the-Sea, July 31, 1874.

DEAR SIR,—Allow me to congratulate you on the very efficient way in which your Detaching Hook performs the duties it is intended for. I have had the one you sent me for J. W. Pease and Co., at Tockett's Mine, attached to the sinking pit rope, and not only attached, but on Tuesday, the 28th inst., I had the engine run full speed up in order to test it, and am glad to say I never saw anything act more satisfactorily. Everyone that saw it done stood amazed when the rope went over the pulley, and left the kibble, chain, &c., hanging in the ring perfect. After such a trial as this, to my mind not a doubt can remain of its perfect efficiency. I intend to use them immediately at every other place I have.

Yours truly, W. COCKBURN.

MACDERMOTT'S

Type No 1

PERFORATOR

TRADE MARK

M W

PATENT ROCK PERFORATORS.

BORING ROCK, SLATE, SHALE, COAL, &c.

M. MACDERMOTT,

Sole Proprietor,

(LATE MACDERMOTT AND WILLIAMS),

SCOTT'S CHAMBERS, PUDDING LANE, E.C.

This is the best hand-worked implement for colliery purposes extant. It can be carried about, set up, taken down, and worked by one man. It bores vertically upward as well as in any other direction. The rate of work is at least four times as great as by the usual methods. The hole made is straight and uniform, and, therefore, specially adapted for the use of cartridges.

Price list and description, with list of places where the Perforators are in use, on application as above.

A Special Type for Overground Work and Shaft Sinking.

Now ready, price 3s., by post 3s. 3d., Fifth Edition; Fifteenth Thousand Copies, much improved, and enlarged to nearly 300 pages.

HOPKINSON'S CONVERSATIONS ON MINES, between Father and Son. The additions to the work are near 80 pages of useful information, principally questions and answers, with a view to assist applicants intending to pass an examination as mine managers, together with tables, rules of measurement, and other information on the moving and propelling power of ventilation, a subject which has caused so much controversy.

The following few testimonials, out of hundreds in Mr. Hopkin's possession speak to the value of the work:—

"The book cannot fail to be well received by all connected with collieries."—*Mining Journal*.

"Such a work, well understood by miners, would do more to prevent colliery accidents than an army of inspectors."—*Colliery Guardian*.

"Its contents are really valuable to the miners of this country."—*Miners Conference*.

"I have works priced £4 that do not contain the same information."—W. W. KENRICK, Colliery Viewer.

"The work is replete on the subject of underground management."—M. BANKS, Colliery Proprietor.

"I have had 20 years' management. It is the best work I ever read, and deserves to be circulated in every colliery district."—JOS. EAMES.

"900 copies have been ordered in Wigan alone, and this is but a tithe of those to whom the book should commend itself."—*Wigan Examiner*.

To be had on application at the MINING JOURNAL Office, 26, Fleet-street, London

GUIDE TO INVESTMENTS.

Published monthly. Post free.

SPARGO'S "GUIDE TO INVESTMENTS"

affords information (ample and correct) of all the best-paying investments.

Capitalists and men of business should consult the "Guide" for reliable and valuable intelligence.

THOMAS SPARGO,

Queen's Buildings, Queen Victoria-street, Mansion House, London, E.C.

Established Twenty-six Years.

43, BISHOPSGATE STREET, LONDON, E.C.

MESSRS. TREDINNICK AND CO., FINANCIAL AGENTS,

and Dealers in Home Government Stocks and Securities, Foreign and Colonial Government Bonds, Mines, and other enterprises.

British Mining Shares of inherent worth and established character. The best of the American and other argenteiferous and auriferous Mines.

Joint-Stock Banks—all of the Metropolitan and most of the recognised Provincial Companies.

Messrs. TREDINNICK AND CO. have SPECIAL BUSINESS in Dolcoath, Tin croft, Carn Brea, Kitty, St. Agnes Consols, South Crofty, West Basset, Van, East Lovell, St. Ives Consols, South Condurrow.

Rock Insurance, paying 80 per cent., and other companies from 20 up to 50 per cent. annually.

London and Westminster, Joint-Stock, Union, National Provincial Bank of England, London and County, paying 20 to 25 per cent.

Bolivian, Spanish, Turkish, Egyptian, Peruvian, and Italian Government Bonds paying 10 to 20 per cent. on market prices.

A LIMITED NUMBER of SHARES for DISPOSAL in an unquestionably good PROGRESSIVE COMPANY.

Investors can inspect a list of 250 Securities declaring dividends of 10 to 20 up to 50 per cent. on application.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.									
Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid		
1500	Alderley Edge, c, Cheshire*	10 0 0	—	—	12 1 8	0 5 0	Apr. 1874		
2000	Ally-y-Crib, t, Talybont*	2 0 0	—	—	0 0 0	0 0 0	Feb. 1873		
3000	Bampfylde, c, i, m., Devon*	1 0 0	—	—	0 0 0	0 0 0	June 1873		
5000	Blanc Caelan, c, St. Cardigan* (24 sh.)	3 10 0	—	—	0 10 0	—	—		
200	Botallack, t, c, St. Cardigan*	116 5 0	—	—	619 15 0	5 0 0	Aug. 1872		
10000	Brookfield, t, c, St. Cardigan*	1 7 6	—	—	2 3 0	0 0 0	Jan. 1872		
4000	Brookwood, c, Buckfastleigh	1 16 0	—	—	2 15 0	0 0 0	Nov. 1871		
3248	Cargill, t, c, Newlyn*	5 4 5	—	—	4 16 3	0 12 6	Oct. 1872		
6400	Cashew, t, Cumbria*	2 10 0	—	—	1 6 0	0 2 6	Aug. 1873		
1600	Carr Brea, c, t, Illogan*	35 0 0	—	—	308 0 0	1 0 0	Feb. 1874		
4000	Cath. & Jane, t, Penrynheadraeth	5 0 0	—	—	0 7 6	0 7 6	June 1873		
2450	Cock's Kitchen, t, Illogan*	20 4 0	—	—	11 17 0	0 7 6	Jan. 1874		
10240	Devon Gt. Consols, c, Tavistock*	1 0 0	—	—	116 10 0	0 12 0	May 1872		
4296	Dolcoath, c, t, Camborne	10 14 10	—	—	104 14 2	0 10 6	July 1874		
5000	Drake Walls, t, c, Calstock	5 0 0	—	—	0 2 0	0 2 0	July 1874		
10000	East Baleswidden, t, Sancerre*	1 0 0	—	—	0 2 11	0 0 0	Feb. 1874		
6144	East Caradon, c, St. Cleer	3 10 0	—	—	222 10 0	1 0 0	May 1874		
300	East Darwen, t, Cardiganshire	32 0 0	—	—	13 11 3	0 2 6	May 1874		
6400	East Pool, c, Illogan	0 9 9	—	—	20 0 0	0 7 6	July 1874		
1906	East Wheal Lovell, t, Wendron*	5 19 0	—	—	0 1 0	0 1 0	May 1873		
5000	Exmouth, t, Christow	0 7 6	—	—	80 15 0	0 10 0	Sept. 1872		
2800	Foxdale, t, Isle of Man*	25 0 0	—	—	0 5 10	0 1 0	Aug. 1874		
40000	Glasgow Carr, c* (30,000 £1 p., 10,000 15s. p.)	—	—	—	16 17 0	0 0 0	Apr. 1874		
15000	Great Laxey, t, Isle of Man*	4 0 0	—	—	0 0 0	0 0 0	Apr. 1874		
26000	Great West Van, t, Cardigan*	2 0 0	—	—	19 6 0	0 0 0	June 1872		
6008	Great Wheal Vor, t, c, Helston*	40 15 0	—	—	1 8 0	0 4 0	May 1874		
6400	Green Harts, t, Durham*	0 6 0	—	—	0 0 0	0 0 0	May 1874		
20000	Grogronion, t, Cardigan*	2 0 0	—	—	0 0 0	0 0 0	May 1874		
1024	Herdfoot, t, near Liskeard*	8 10 0	—	—	62 5 0	0 15 0	Oct. 1872		
18000	Hingston Down, c, Calstock* (21 sh.)	1 0 0	—	—	4 3 0	0 0 0	Dec. 1872		
25000	Killalee, t, Tipperary	1 0 0	—	—	0 3 11 3	0 0 0	Mar. 1874		
400	Lisburne, t, Cardiganshire	18 15 0	—	—	563 10 0	1 0 0	May 1874		
6120	Lovell, t, Wendron	0 10 0	—	—	0 17 6	0 1 6	Jan. 1874		
11000	Melindur Valley, t, Cardigan*	3 0 0	—	—	0 3 7	0 3 7	Jan. 1874		
9000	Minera Mining Co., t, Wrexham*	5 0 0	—	—	63 11 8	0 2 0	May 1874		
20000	Mining Co. of Ireland, c, t, i*	7 0 0	—	—	0 8 0	0 3 6	July 1872		
12000	North Hendre, t, Wales	2 0 0	—	—	0 15 0	0 2 6	June 1874		
2000	North Levant, t, c, St. Just*	11 9 6	—	—	4 13 0	0 12 0	Sept. 1873		
7000	Old Treburgett, t, ordinary shares	1 0 0	—	—	0 0 0	0 0 0	Feb. 1874		
9000	Old Treburgett, t, s-l (100 p. pref.)	0 10 0	—	—	0 10 0	0 10 0	Feb. 1874		
6894	Pedn-ar-dra, t, Redruth*	9 2 0	—	—	0 10 0	0 10 0	Nov. 1873		
6000	Penrhall, t, St. Agnes	3 0 0	—	—	3 5 0	0 2 0	July 1874		
50000	Penrithall, t, c, Gwennap*	2 0 0	—	—	0 1 0	0 1 0	Nov. 1873		
6000	Penrithall, t, c, Gwennap*	4 13 4	—	—	39 19 0	0 4 0	Nov. 1872		
1772	Polbri, t, St. Agnes	15 0 0	—	—	1 12 6	0 5 0	Mar. 1872		
18000	Prince Patrick, t, c, Holywell	1 0 0	—	—	0 7 0	0 2 0	July 1874		
1120	Providence, t, Lelant*	16 17 7	—	—	104 12 6	0 10 0	Sept. 1872		
2000	Queens, t, Cardigan*	2 0 0	—	—	0 2 0	0 2 0	Sept. 1874		
2000	Roman Gravel, t, Salop*	7 10 0	—	—	4 2 0	0 8 6	Aug. 1874		
10000	Shelton, c, t, St. Austell	1 0 0	—	—	715 0 0	0 2 0	July 1872		
612	South Caradon, c, St. Cleer	1 5 0	—	—	0 10 0	0 2 6	July 1872		
6000	South Corn, t, c, Illogan	1 17 6	—	—	1 1 6	0 1 6	Nov. 1870		
6000	South Darwen, t, Cardigan*	3 0 0	—	—	0 9 0	0 4 0	Nov. 1871		
8771	St. Just Amalgamated, t*	3 10 0	—	—	3 8 0	0 6 0	Feb. 1873		
12000	Tankerville, t, Salop*	6 0 0	—	—	47 8 6	0 5 0	Aug. 1874		
10000	Tincroft, c, t, Pool, Illogan*	9 0 0	—	—	0 1 0	0 1 0	Mar. 1874		
15000	Trevel, t, c, Bodmin	2 0 0	—	—	9 11 0	0 10 0	Nov. 1872		
4000	Trumpet Consols, t, Helston	6 5 0	—	—	12 19 6	0 10 0	July 1874		
15000	Van, t, Llanidloes*	4 5 0	—	—	62 10 0	0 5 0	June 1873		
9000	W. Chiverton, t, Perranzabuloe	10 0 0	—	—	0 1 0	0 1 0	Aug. 1874		
612	West Tolgus, c, Redruth	98 0 0	—	—	3 12 6	0 6 0	Oct. 1872		
2048	West Wheal Frances, t, Illogan	27 3 9	—	—	63 10 0	1 0 0	Aug. 1872		
612	Wheal Basset, c, Illogan*	5 2 6	—	—	11 17 0	0 2 6	Aug. 1872		
4296	Wheal Killy, t, St. Agnes	5 4 6	—	—	82 2 3	0 10 0	May 1872		
886	Wheal Margaret, t, c, Foy, Lelant*	15 17 0	—	—	0 1 0	0 1 0	Jan. 1873		
10000	Wheal Mary, t, St. Dennis	8 0 0	—	—	522 10 0	4 0 0	Aug. 1872		
80	Wheal Owles, t, St. Just*	76 5 0	—	—	0 2 9	0 9 9	Mar. 1874		
12000	Wheal Russell, c, Tavistock	1 0 0	—	—	0 1 0	0 1 0	Jan. 1873		
16000	Wheal Tregoss, t, c, Roche	1 0 0	—	—	0 1 6	0 6 6	May 1873		
10000	Wheal Whistler, c, t, Warleggan*	1 0 0	—	—	62 9 0	0 2 6	Mar. 1872		
36000	Wicklow, c, sul, t, Wicklow	2 10 0	—	—					

FOREIGN DIVIDEND MINES.									
Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid		
35500	Alamillos, t, Spain*	2 0 0	—	—	1 3 9	0 2 0	Mar. 1874		
30000	Almaden and Tinto Consols, t*	1 0 0	—	—	0 4 3	0 1 0	May 1873		
20000	Australian, c, South Australia	7 7 6	—	—	0 11 8	0 2 0	July 1873		
10000	Battle Mountain, t, c, (6240 part pd.)	5 0 0	—	—	0 10 0	0 10 0	Nov. 1872		
16000	Birdseye Creek, c, California*	4 0 0	—	—	0 14 0	0 2 6	June 1874		
6000	Bismarck, t, Germany*	10 0 0	—	—	0 17 4	0 8 0	July 1873		
12320	Burra Burra, c, So. Australia	5 0 0	—	—	56 10 0	1 0 0	Oct. 1872		
20000	Cape Copper Mining, t, So. Africa.	7 0 0	—	—	16 15 0	0 5 0	June 1872		
40000	Cedar Creek, c, California*	5 0 0	—	—	0 5 0	0 2 6	June 1872		
30000	Central American Association, t*	0 15 0	—	—	0 6 0	0 1 0	July 1869		
15000	Chicago, t, Utah*	10 0 0	—	—	0 16 0	0 4 0	Sept. 1873		
21000	Colorado Terrible, t, Colorado*	5 0 0	—	—	0 9 6	0 1 6	July 1874		
76182	Don Pedro North del Rey*	0 16 0	—	—	2 5 9	0 2 0	Mar. 1872		
93500	Eberhardt and Aurora, s, Nevada*	10 0 0	—	—	1 0 0	0 1 0	July 1871		
2382	Eldorado, c, Nova Scotia*	10 0 0	—	—	2 5 0	0 15 0	June 1873		
60000	Emma, g, s, Utah (25,000 fully pd.)	20 0 0	—	—	3 12 0	0 6 0	Dec. 1872		
70000	English and Australian, c, S. Aust.	2 10 0	—	—	2 7 3	0 2 6	Mar. 1873		
18000	Ferguson, c, California*	2 0 0	—	—	0 3 0	0 3 0	April 1872		
30000	Flagstaff, t, Utah*	10 0 0	—	—	4 2 0	0 6 0	July 1874		
26000	Fortuna, t, Spain*	2 0 0	—	—	4 4 4	0 4 0	Oct. 1872		
30000	Gold Butte, t, Nevada*	5 0 0	—	—	0 2 4	0 2 4	June 1873		
68000	Kapunda, t, Mining, Australia*	1 0 0	—	—	0 14 0	0 2 0	July 1873		
90000	Last Chance, s, t, Utah	5 0 0	—	—	0 14 0	0 2 0	July 1873		
16000	Linares, t, Spain*	3 0 0	—	—	14 10 0	7 6 0	Mar. 1874		
7837	Lusitania, Portugal* (25 shares)	3 10 0	—	—	11 1 6	0 1 6	Mar. 1873		
15000	Mammoth Copperopolis of Utah, c, s	10 0 0	—	—	0 5 0	0 5 0	Dec. 1872		
5000	Mountain Chief, s, Utah*	10 0 0	—	—	0 4 0	0 4 0	Jan. 1873		
18000	Prusian Mining & Ironworks, c, t	30 0 0	—	—	6 0 0	0 3 0	July 1873		
10000	Portgibaud, t, France	20 0 0	—	—	15 8 0	0 19 0	July 1874		
100000	Port Phillip, c, Clunes*	1 0 0	—	—	1 8 0	0 1 0	Jan. 1872		
54000	Richmond Consols, s, Nevada*	5 0 0	—	—	1 16 0	0 8 0	July 1874		
120000	Scottish Australian Mining Co., t*	1 0 0	—	—	15 per cent.	—	May 1874		
112500	Sierra Butte, c, California*	2 0 0	—	—	1 8 0	0 2 0	Nov. 1873		
60000	South Butte, s, Nevada*	5 0 0	—	—	0 14 2	0 2 0	Nov. 1873		
20000	Swetland Creek, c, California*	4 0 0	—	—	2 16 0	0 4 0	June 1874		
20000	Tollima, g, s* (6000 sh. are £5 f. pd.)	4 0 0	—	—	0 11 6	0 6 6	May 1874		
800	Westphalian, t, c, Prussia*	20 0 0	—	—	54 0 0	0 20 0	Dec. 1873		
15000	Western Andes, s* (8000 £5 f. pd.)	3 10 0	—	—	1 3 7	0 1 0	Aug. 1874		

NON-DIVIDEND FOREIGN MINES.						
Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Coll.	
20000	Anglo-Australian, g, Victoria*	2 10 0	—	—	—	Sept. 1872
20000	Australian United, g, Victoria*	2 10 0	13 1/2	13 1/2	—	Fully pd.
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	—	—	—	Fully pd.
30000	Blue Tent, hyd., California	5 0 0	—	5 5 5/8	—	Fully pd.
60000	Braganza, g, Brazil*	0 15 0	—	—	—	Oct. 1870
12000	Camp Floyd, s, Utah*	10 0 0	—	—	—	Fully pd.
35000	Cesena Sulphur Company, Romagna, Italy*	10 0 0	—	—	—	Fully pd.
80182	Chontales, g, s, Nicaragua* (and 12,542 of £1 15s.)	2 0 0	3/4	3/4 3/4	—	Fully pd.
10000	Clifton, t, Colorado*	10 0 0	—	—	—	Feb. 1872
10000	Crescent, g, Plumas County, California*	10 0 0	—	—	—	Fully pd.
100000	Cuabao, g, Minas Geraes, Brazil*	0 17 6	—	—	—	June 1872
10000	Douglas, s, Georgetown, Col.	5 0 0	—	—	—	Fully pd.
7500	East Sheboygan Preference* (40,000 ordinary shares)	2 0 0	—	—	—	Fully pd.
35000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	—	—	—	Dec. 1871
60000	Exchequer, g, s, California*	1 0 0	—	—	—	Fully pd.
55000	Frontino and Bolivia, g, New Granada*	2 0 0	3/4	3/4 3/4	—	Fully pd.
50000	General Brazilian, g*	1 0 0	—	—	—	Fully pd.
10000	Goetz Tunnel Co., Georgetown, Col.	7 0 0	—	—	—	Fully pd.
40000	Holcombe Valley, g, California	1 0 0	—	1 1 3/4	—	July 1873
6000	Hornachos, s, s, i, (£10 shares)	9 0 0	—	—	—	Jan. 1874
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—	—	—	Fully pd.
20000	Independence, g, California*	10 0 0	—	3 2 3/4	2 3/4	Fully pd.
30000	Independence, g, California*	5 0 0	—	—	—	Fully pd.
10000	Javali, g, Nicaragua*	2 0 0	3/4	3/4 3/4	—	Fully pd.
12000	Lanestosa, s, i, z, Viscaya, Spain (£2 shares)	1 10 0	—	—	—	Jan. 1874
65000	London and California, g*	2 0 0	—	—	—	Fully pd.
75000	Malabar, g, Colombia* (65000 issued)	1 0 0	3/4	3/4 3/4	—	Fully pd.
4000	Malaga, i, Spain*	10 0 0	—	—	—	Fully pd.
10000	Malpaso, g, Colombia* (10000 pref. shares, 10s. paid)	1 0 0	3/4	3/4 3/4	—	Fully pd.
12000	Menzenberg, c, Honnef, Germany*	5 5 0	—	—	—	Fully pd.
14000	Montague & Waverley Gold Quartz Crushing Co., * N. Scot.	2 0 0	—	—	—	Allotment
6000	Monte Loreto, g, c, Italy*	5 0 0	—	—	—	Fully pd.
15000	New Pacific, g, s, Nevada*	0 7 6	3/4	3/4 3/4	—	Jan. 1874
46000	New Quebrada, c, Venezuela*	5 0 0	3 1/2	3 1/2 3/4	—	Fully pd.
50000	New Rosario, s, Mexico*	1 0 0	1	—	—	Fully pd.
20000	New Zealand, g, Kapanga, g, Cocomandel*	10 0 0	4 1/2	4 1/2 3/4	—	Fully pd.
10000	Newfoundland, s, c, Canada*	10 0 0	—	—	—	Fully pd.
20000	North American, g*	4 0 0	—	—	—	Fully pd.
50000	Pannicillo, c, Chili*	4 0 0	1 1/4	3/4 1 1/4	—	Fully pd.
80000	Pestarena United, g, Italy*	3 0 0	—	—	—	Fully pd.
50000	Rica, g, Colombia* (40000 issued)	1 0 0	—	3/4 3/4	—	Fully pd.
100000	Rio Tinto, s, c, Huelva, Spain	8 0 0	7	6 1/2 3/4	—	Jan. 1874
10000	Rossa Grande, g, Brazil* (£1 shares)	0 19 0	3/4	3/4 3/4	—	July 1872
32500	Ruby Consolidated, s, Nevada*	10 0 0	—	—	—	Fully pd.
30000	Russia, c, Orenburg and Uta*	10 0 0	2 1/2	2 1/2 3/4	—	Fully pd.
25000	San Pedro, c, Chili*	2 0 0	3/4	—	—	Fully pd.
30000	Santa Barbara, g, Brazil	0 7 6	1	3/4 3/4	—	Mar. 1872
10000	Silver Plume, s, Colorado*	1 0 0	—	—	—	Fully pd.
87500	Snowdrift, s, Colorado*	10 0 0	—	—	—	Fully pd.
245000	St. John de Rey, s					